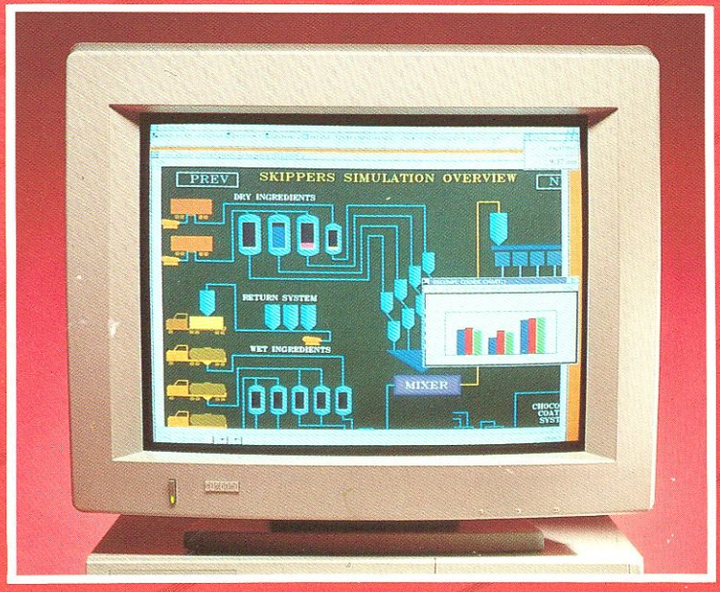
Digital's new
VT1300 – high performance leader
in Colour X Windows terminals

FEBRUARY - APRIL 1991

DECdirect Hardware



The Best of Hardware from the world's No.1 in networking

Small Systems and Workstations

Networks and Communications

Terminals

Printers

Accessories, Supplies and Magnetic Media

Software Documentation

Disk Drives, Tape Drives and Memory

Ring us now on
0734 393200

digital

How to order

DECdirect means easier ordering by telephone, fax, telex or mail, and faster delivery.

By Telephone **0734 393200**

By Fax **0734 205442**

By Telex **847227 DECDIRG**

By Post Send your completed form to:
Digital Equipment Co Ltd
DECdirect
PO Box 85, Reading, RG2 0TU

Hotlines

Our friendly and efficient team are here to help. Questions regarding your order can be answered by 'phoning our Customer Service hotline.

Technical advice about upgrading your existing equipment is available, by calling our pre-sales technical support hotline.

ORDER/PRE-SALES ENQUIRIES
0734 393200

PRE-SALES TECHNICAL ENQUIRIES
0734 393200

POST SALES/CUSTOMER SERVICE
0734 393030

Guaranteed

quality products backed by the best service and support from the World's No 1 in Networking

The industry's leading products

DECdirect – offers the most comprehensive range of systems, quality add-ons and consumables available.

Better value

Our really competitive price structure, plus our special discount terms and volume packs make DECdirect exceptional value.

Off-the-shelf despatch

Just 'phone before noon and ask for our Express Despatch Service.

Systems availability

Small Systems and workstations can usually be supplied within two weeks and DECstation PCs within 5 days. Delivery can, however, be affected by product availability, so please telephone for confirmation.

Free delivery

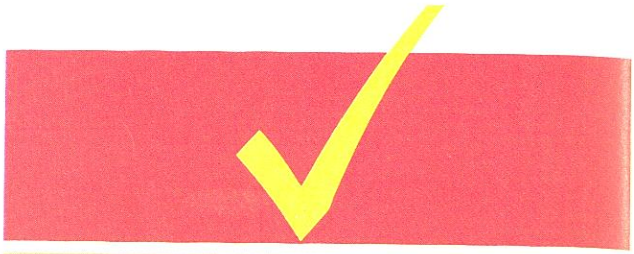
All orders over £100 are delivered free of charge. Orders below £100 carry a £10 delivery charge.

Comprehensive warranty

No half measures, a full 12 months free warranty and prime shift cover equivalent to the agreement provided for your other equipment.

DECsystem support

Hardware and software services combined in one comprehensive package. This service forms an integral part of your 12 months warranty and gives you the flexibility to cover additional options and, 'value added' software purchased during warranty.



CHECKLIST
for your fast order channel

Help us to continue to provide you, our customers, with as high a level of service as possible. By using the check list below whenever you 'phone or send us an order, you will help to eliminate the possibility of errors on delivery or installation.

Tick

1 *Your complete purchase order number* ☐

2 *Your purchasing contact and telephone number* ☐

3 *Your installation/user contact and telephone number* ☐

4 *Your Digital account number* ☐

5 *Your DBA (Digital Business Agreement) number* ☐

6 *Is the equipment for your own use or for resale?* Own ☐ Resale ☐

7 *Is partial delivery acceptable?* Yes ☐ No ☐
If yes, which items are the most urgent?

8 *Do you have a valid quotation from Digital?* Yes ☐ No ☐
If yes, what is the quotation number?

9 *Is the ordered option or software to be added to an existing system?* Yes ☐ No ☐
If yes, what is the system's serial number?

10 *Do you require software updates for the software items being purchased?* Yes ☐ No ☐

For written orders:

11 *Is this a confirmation of a telephone order?* Yes ☐ No ☐
If yes, what is the Digital supplied reference number?

Conditions of Business

The sale and licensing of Products and Distributed Software to those customers without a Digital Business Agreement "DBA", is governed by the standard Terms and Conditions set out on pages 143/144 of this catalogue. For those customers with a DBA, the terms of that Agreement shall govern business with Digital.

The DECdirect team is here to help you

ECdirect offers fast off-the-shelf access to a wide range of Digital
prducts, peripherals and supplies. In addition, our telesales and technical
suport teams can provide valuable assistance to help with product selection,
tecnical specifications and quotations.

pposite, you'll find a check list of information that you ideally need
whn placing an order. Help us to help you get the very best from
theDECdirect service.

Dear Customer

Incrasingly, the DECdirect range of products and services is providing
youthe business computer user, with the best and fastest solution to
you needs.

Weisten carefully to our customers' requirements and constantly
eneavour to develop the DECdirect supply channel to respond to
yor needs.

Or range continues to grow in size and with an increasing choice of
inustry-leading Digital equipment and peripherals.

Nthing is left to chance. All our equipment is guaranteed, we are the
vorld's No 1 in networking, our speed of service – through DECdirect –
i off-the-shelf and our technical support team is available by 'phone,
fx or letter.

Vith this issue you'll find our new DECdirect Supplies Supplement that's
evoted exclusively to Accessories & Supplies .

This doesn't mean that the format of DECdirect will change but it does
mean that there is now a special quarterly publication for those
customers who are only interested in Accessories & Supplies.

Thank you for choosing Digital and remember, the DECdirect team is
always here to help.

Yours sincerely

Peter Herke

Peter Herke
Merchandising Director

P.S. **PCs have now joined Terminals and Printers on an aggressive discount curve; making them an even more competitive buy.**

Index

Alphabetical Product Index	4/5
New Products	6
Small Systems and Workstations	8
Personal Computer Selection Guide	10
Workstation Selection Guide	14
MicroSystem Selection Guide	24
Networks and Communications	34
Cable Configurators	62
Terminals	64
Terminal Selection Guide	65
Printers	73
Printer Selection Guides	74
Accessories, Supplies and Magnetic Media	94
Software Documentation	116
Disk Drives, Tape Drives, Memory and Cluster Controllers	122
Part Number Index	139

This Issue

OPEN DECconnect
Digital's innovative new multivendor cabling system: application independent, EIA/TIA 568 compliant.

Bulk Value
Check out the Accessories and Supplies Bulk Packs – the best value, the best way to buy.

SPECmarks
'Industry-standard' now it's official.

NEWS

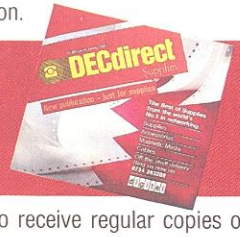
PCs join Terminals and Printers on aggressive discount curve

As market leader in terminals and a major supplier of printers, Digital offers attractive discounts to volume buyers of these products. Now, Digital is offering the same saving advantage to its PC buyers.

Under a DBA agreement, customers receive type 3 discount which varies from 5 to 21%. However, Terminals, Printers, and now for the **first time** PCs are available on end-user discount code U which means customers receive between **22 and 31% discount** (see below).

This makes Digital PCs a very competitive buy. Deliveries of PC products are typically only 3 days from receipt of order, and, configurations can be pre-assembled and tested to ensure the minimum inconvenience during installation.

New Digital publication for Accessories & Supplies



With this issue you will receive the first copy of our new publication – **DECdirect Supplies Supplement** devoted purely to Accessories, Supplies, Magnetic Media and Cables.

This new publication will enable us to give greater coverage on a selection of our range of supplies than is possible with DECdirect. It will also include relevant feature articles and useful data for customers whose specific concern is the correct selection of these products.

Once you've had an opportunity to have a look at this new supplement please hand it to your colleague who is responsible for your Accessories & Supplies purchases.

If you wish to receive regular copies of the New DECdirect Supplies Supplement please fill in and return the reply-paid card to be found inside the supplement.

SPECmark replaces VUP for new industry-standard

An agreement between Digital and the other major computer manufacturers has resulted in SPEC (Systems Performance Evaluation Co-operative).

SPEC is an organisation that will develop standard benchmarks for measuring computer systems.

The advantage is that the 'industry-standard', expressed as SPEC, will have been measured from known and agreed criteria. It will therefore become a recognised and more accurate method of assessing performance.

Taking care of the environment

It is Digital's policy to reduce, and wherever possible, eliminate the use of chloroflourocarbons (CFCs). We now indicate with our ozone friendly symbol, all such CFC free items.

DBA

(Digital Business Agreement Discount Table)

The discount codes appearing in the part number index are as follows. Discounts are only available to customers ordering under a current DBA.

End user (EU).

Discount code		3	8	U	N
Category		A	A	B	N/A
Product adder		0%	15%	10%	N/A
Level	A	0%	0%	0%	N/A
	B	5%	20%	22%	N/A
	C	7%	22%	22%	N/A
	D	9%	24%	22%	N/A
	E	12%	27%	22%	N/A
	F	14%	29%	24%	N/A
	G	16%	31%	26%	N/A
	H	17%	32%	27%	N/A
	I	18%	33%	28%	N/A
	J	18.5%	33.5%	28.5%	N/A
	K	19%	34%	29%	N/A
	L	19.5%	34.5%	29.5%	N/A
	M	20%	35%	30%	N/A
	N	20.5%	35.5%	30.5%	N/A
	P	21%	36%	31%	N/A

N/A = discount not available.

For more information on available discounts please

Free installation plus full 12 months warranty

Our installation options have been carefully chosen to make installation of your new equipment as easy for you as possible. And we make sure you're given the best protection with our extensive full 12 months warranty.

Your guide to installation

Digital products are either installed by our qualified installation engineers or have been designed to be installed by our customers and supplied with comprehensive installation instructions.

i All products designated **i** will be installed, free of charge, by a Digital installation engineer. Our local field service office will contact you so that a mutually convenient time can be arranged.

C Those products marked **C** have been designed to be customer installable and come complete with instructions. However, if ordered and installed at the same time as **i** products, the installation will be carried out free of charge by Digital.

O Products listed with the symbol **O** are designed to be customer installable and are supplied with instructions. However, should assistance be required, please contact your local field service office, who will arrange to complete the installation (at a mutually convenient time) free of charge.

*All the above product types – **i** **C** **O**, are covered by a full twelve months on-site system service warranty*

Guide to installation symbols

- **i** *Free installation by Digital*
- **C** *Designed to be installed by customers*
- **O** *Designed to be installed by customers Free assistance given if required*

Products without an installation code, as given above, are either consumable items, like acoustic hoods which carry 12 months RTD (Return to Digital) warranty or, consumable items such as paper or ribbons, which carry 3 months RTD warranty on defective goods.

Delivery to suit your needs

The DECdirect service is geared to give you a fast response to your requirements, so we offer different delivery methods to suit your particular needs.

Our normal delivery takes between 3 and 5 working days, whilst our Express Despatch Service will ensure your order is with you the following day, provided the order is received before noon. This, however, does not apply to Small Systems and Workstations, for which delivery is normally 2 weeks after receipt of order. DECstation PC's, however, have a faster delivery time of 5 days.

When you place your order, a member of the Telesales team will be able to give you a definite day on which you can expect to receive your consignment.

How the delivery service works

Normal Delivery

Normal delivery is free for orders over £100, orders below £100 carry a £10 handling charge.

Orders weighing less than 25 kg are delivered within 3 working days. Items with the **D** symbol, or consignments of 25 kg or more, are delivered within 5 working days.

Express Despatch

Please specify Express Despatch when ordering for the fastest delivery. Express Despatch orders may incur a delivery charge.

If an order is received BEFORE NOON, then it will be delivered the next working day.

If an order is received AFTER NOON then it will be delivered on the second working day after the day of receipt. For example, if an order is received Tuesday afternoon it will be delivered on Thursday.

0734 393200

Guarantee of Excellence

A full 12 months warranty

Only with Digital products can you guarantee complete compatibility with your Digital computer systems and be sure of maximum reliability and efficiency.

We offer a full 12 months warranty on all Digital equipment and, all add-ons and upgrades too if we install them.

Beyond the first year, maintenance cover is reassuringly continued by adding your equipment to your maintenance contract.

Even consumable items like paper, ribbons and printwheels are covered by a three month exchange on defective but unused items.

Alphabetical Product Index

A

Accessories, Supplies and Magnetic Media 94/121
Acoustic covers 95
Adapter cables, synchronous communication 53
Adapters for RS232 to DEC423 60
Arm, Universal monitor 101
Asynchronous/synchronous communication controllers 52
Asynchronous communication controllers, Q-bus 52

B

Bar codes 108
Barrel connector, 'N' type coaxial 55
Base, tilt/swivel 100
Bi-directional tractor unit, LA210 90
BNC cable interconnection products 58
Box/file storage, floppy disks 118/119
Bulk packs 94

C

Cables and connectors 53/63
Cable configurator 62/63
Cables, adapter, synchronous communication 53
Cables, DECconnect 54/58, 60
Cables, Ethernet coaxial 53
Cables, Ethernet ThinWire 55
Cables, Ethernet transceiver 53
Cables, interconnection, BNC 58
Cables, intrconnection, MMJ 60
Cables, interconnection, terminal 61
Cables, SDI 129
Carrying case, RSE 121
Cartridge kits, toner 115
Cartridges and ribbons 110/111
Cartridges, disk 119
Cartridges, font 103/105, 108
Cartridges, ink 114
Cartridges, optical 120
Cartridges samples, font 103/105
Cartridge storage cabinets 120
Catchers, paper 98
CI VAXcluster 123/125
Cleaner, platen 116
Cleaning kits 116/117
Coaxial cables, Ethernet 53
Codes, bar 108
Colour printers 82/83
Communication controllers, asynchronous 52
Communication controllers, asynchronous/synchronous 52
Communication controller, synchronous 42
Communication controller, 8/16 lines 36
Computer integration, personal 49/51
Configuration guide, Ethernet standard and ThinWire 55
Connector, 'N' coaxial barrel 55
Controllers, asynchronous, communication 52
Controllers, asynchronous/synchronous communication 52
Controllers, disk 132/133
Controllers, Ethernet 48
Conversion kit – LN03 script printer 79
Covers acoustic 95
Covers, dust 98
Crossover switches 61
Cut sheet paper 112/113

D

DECbridge 500, FDDI 47
DECconnect, Open 56/57
DECconnect cables 53/54
DECconcentrator 500 47
DECconnect faceplates, Open 58
DEClaser 2000 family 76/78
DEClaser supplies 102/103
DEC FDDI Workstation controller 700 48
DEC EtherWorks 51
DECmux 300 family 37
DECprint utility 83
DECrepeater 200, LAN device 40
DECrouter 250, WAN device 45
DECserver 200 35
DECserver 250, LAN device 40
DECserver 300 35
DECserver 550 36
DECstation 220 10/11
DECstation 300 10/11
DECstation 325 12
DECstation 425 13
DECstation 2100 20/21
DECstation 3100 20/21
DECstation 5000 Model 200 22/23
DECsystem 5100 32
DECsystem 5500 33
DELNI, LAN Device 38
DELQA-YM, Ethernet controller 48
DELUA-M, Ethernet controller 48
DEMPR, LAN Device 41
DEMSA, WAN Device 43/44
DEMSB, WAN Device 44/45
DESPR, LAN Device 41
DESTA, Ethernet Transceiver – ThinWire 41
Desktop printer stands 98
Desktop terminal stand 101
Disk cartridges 119
Disk controllers 132/133
Disk drives, high end 126/129
Disk drives, low to medium 129/132
Disk drives, optical 133
Disk Drives, Tape Drives, Memory and Cluster Controllers 122/138
Disk packs 121
Diskette storage boxes/files 118/119
Disks, floppy 118
Documentation kits, software 116
Dot matrix printers 84/90
Drives, tape 134/135
Dry imager 115
DSV11 synchronous communications controller, WAN Device 42
Dust covers 98

E

Ethernet cables, Co-axial 53
Ethernet cables, DECconnect 54
Ethernet cables, ThinWire 55
Ethernet controllers 48
Ethernet multiport repeater, ThinWire 41
Ethernet over twisted pair 54
Ethernet over shielded twisted pair 54
Ethernet singleport repeater, ThinWire 41
Ethernet standard and ThinWire configuration guide 55
Ethernet station adapter, ThinWire 41
Ethernet transceivers 41/42
Ethernet transceiver cables 53

F

Faceplates, Open DECconnect 58
Fanfold paper 112/113
Filters, screen 100
Floppy disks 118
Floppy disk cleaning kit 117
Floppy disks storage, box/file 118/119
Font cartridges 102/103
Font cartridges samples 103/105
Fuser oil 114
FDDI 46/48

H

H3350 Ethernet transceiver – Twisted Pair 42
H4005, Ethernet transceiver – Thick Wire 42
Head cleaning kits 116/117
High end disk drives 126/129

I

Imager, dry 115
Ink cartridges 114
Integral acoustic cover stand 96
Integration, PC 49/51
Interconnection products, BNC cables 58
Interconnection products, MMJ cables 60
Interconnection products, terminal cables 61
Interface switches 61

K

Keyboard template, IBM 101
Keyboxes for diskette storage 118
Keycaps and overlays 100

L

LA70 Dot Matrix Printer 84/85
LA70 Single-bin sheet feeder 85
LA70 Promotion kit 85
LA70 Starter kit 85
LA75 Dot matrix printer 86/87
LA75 Single bin sheet feeder 87
LA75 Starter kit 86
LA210 Bi-directional tractor feed 90
LA210 Dot matrix printer 90
LA210 Starter kit 90
LA324 Dot matrix printer 88/89
LA324 Promotion kit 89
LA324 Starter kit 89
LA324 Triple-bin sheet feeder 89
Labels 112/113
LAN Bridges 49
LAN Devices 38/41
Laser table 97
Laser printers 76/81
LG01 Line printer 92
LG02 Line printer 92
LG31 Line printer, impact 91
Library systems, storage 136
Line Printers 91/93
LJ250 colour printer 82/83
LJ252 colour printer 82/83
LJ250 Starter kit 83
LN03 Conversion kit 79
LN03 Font packages 108
LN03 Laser feeder 97
LN03 Laser printers 78/79
LN03 RAM cartridge 108
LN03R ScriptPrinter 78/79
Low to medium end disk drives 129/132
LP29 Line printer 93
LP37 Line printer 93
LPS20 Supplies 115

Alphabetical Product Index

M

Maintenance kits, user 114
Magnetic tapes 120
Magnetic tape, storage box 121
Memory boards, VT1200 108
Memory, VAX 136/138
MicroSystem selection guide 24/25
MicroVAX 3100 26/27
MicroVAX 3300 28/29
MicroVAX 3400 28/29
MMJ cable interconnection products 60
Mobile terminal table 99
Monitor arms, universal 101
Mouse mat 101
Multiport repeater, ThinWire Ethernet 41
MUXserver 300 family 37

N

N' Type coaxial barrel connector 55
N' Type coaxial terminator 55
Networks and Communications 34/63
Newly Introduced 6/7

O

Oil, fuser 114
Open DECconnect 56/57
Open DECconnect faceplates 58
Optical cartridge 120
Optical disk drive 133
Overlays, keys 100

P

Packs, disk 121
Paper 112/113
Paper, catchers 98
Paper trays 98
Part Number Index 139/142
PATHWORKS Server 3100e 50
PCs, DECstation 10/13
PC integration packages 51
Pens, LVP16 109
Personal computers 9/13
Personal computer integration 49/51
Personal computer selection guide 9
Personal computers, DECstation 10
Platen cleaner 116
Plotter Pens 109
Printbands 109
Printers 73/93
Printer selection guides 74/75
Printer stands 96/97
Printers
DECIaser 2000 family 76/78
LA70 Dot matrix 84/85
LA75 Dot matrix 86/87
LA210 Dot matrix 90
LA324 Dot matrix 88/89
LG01 Line 92
LG02 Line 92
LG31 Line 91
LJ250 Colour 82/83
LJ252 Colour 82/83
LN03 Script 78/79
LP29 Line 93
LP37 Line 93
PrintServer 20 80/81
PrintServer 40 Plus 80/81
PrintServer 20 supplies 115
Printwheels 106/107
Promotion kits
DECIaser 2000 family 78
LA324 89
LA70 85
VT320 99
VT420 99

Q

Q-bus Asynchronous communication controller 52

R

RAM cartridge, LN03 108
Removable Storage Element, carrying case 121
Repeaters, ThinWire Ethernet 41
RETOS 83
Ribbons and cartridges 110/111
Roll paper 112/113
RS232 connections guide 60, 87
RV20 Optical disk drive 133

S

Samples of typeface styles 103/107
Satellite equipment room products 59
Screen filters 100
Script printer 78/79
SCSI storage guide 19
SDI cables 129
Selection guides
MicroSystem 24/25
Personal Computers 9
Printers 74/75
Terminal servers 38
Video Terminals 65
Workstations 14/15
Serial interface switches 61
Sheet feeders LA70 85
LA75 87
LA324 89
Sheet paper 112/113
Shockwatch impact detector 119
Singleport repeater, ThinWire Ethernet 41
Small Systems and Workstations 8/33
Software documentation kits 116
Stand, universal integral acoustic cover 96
Stands, printer 96/98
Starter kits
DECIaser 2000 family 78
LA70 85
LA75 86
LA210 90
LA324 89
LJ250 83
Station adapter, ThinWire Ethernet 41
Storage adapter, KFQSA 133
Storage boxes, diskette 118
Storage boxes/file, floppy disks 119
Storage boxes, magnetic tape 121
Storage cabinets, cartridge 120
Storage library systems 136
Swivel base, Tilt 100
Synchronous communication adapter cables 53
Synchronous communication controller, DSV11 42

T

TA90 Head cleaning kit 117
Table, Laser 97
Table, terminal 99
Tape drives 134/135
Tapes, magnetic 120
Terminal cleaning kit 116
Terminal cable interconnection products 61
Terminal, desktop stand 101
Terminal table, mobile 99
Terminals
VT330 68/69
VT340 68/69
VT420 66/67
VT1200 70/71
VT1300 72
Terminal servers 35/38
Terminal servers guide 38
Terminator, 'N' type coaxial 55
ThinWire and Ethernet standard configuration guide 55
ThinWire Ethernet cables 55
ThinWire Ethernet multiport repeater 41
ThinWire Ethernet singleport repeater 41
ThinWire Ethernet station adapter 41
Tilt/swivel base 100
TK50/52 Cleaning kits 117
TK storage boxes 121
Toner cartridge kits, 115
Transceiver cables, Ethernet 53
Transceiver, Ethernet 41/42
Transparencies 112/113
Trays, paper 98
Typeface styles, samples 103/107
TLZ04 Cleaning kit 117
TZK04 Cleaning kit 117

U

Universal printer stand 96
Universal integral acoustic cover stand 96
User maintenance kits 114
Universal Monitor Arm 101

V

VAXBI, Asynchronous/Synchronous communication controller 52
VAX4000 Model 300 30/31
VAXcluster, CI 123/125
VAX Memory 136/138
VAXserver 3300 28/29
VAXserver 3400 28/29
VAXstation 3100 16/18
VAXstation 3100 configurations guide 17
Video Terminals and Accessories 64/72
VT320/ VT420 Promotion kits 99
Video Terminal selection guides 65
VT330 Video terminal 68/69
VT340 Video terminal 68/69
VT420 Video terminal 66/67
VT1200 Video terminal 70/71
VT1300 Video terminal 72

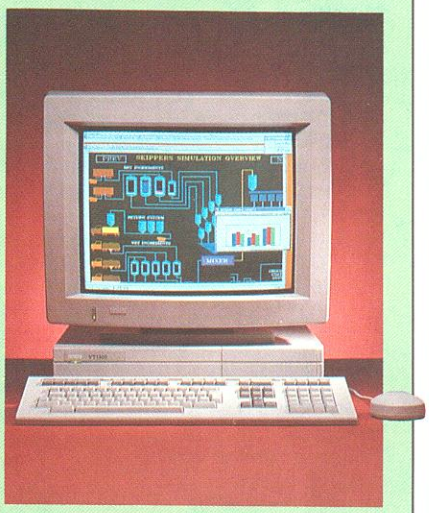
W

WAN Devices 42/45
Wire paper catchers 98
Workstation Selection Guide 14/15

X

X Windows terminal, VT1200 70/71
X Window terminal, VT1300 72

Newly Introduced



VT1300 Video Terminal

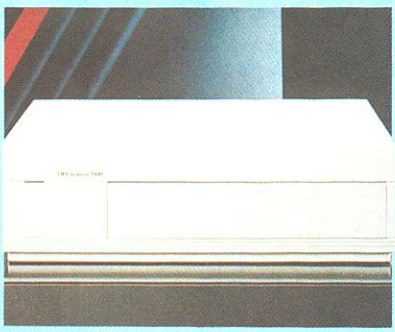
The latest high performance colour X Window terminal. The VT1300 operates like a workstation with access to thousands of applications.

See page 72.

VAXstation 3100 Model 76

This latest VAXstation offers better price/ performance than any other workstation in the VAXstation family. And, with SPX, up to 10 times the graphics performance.

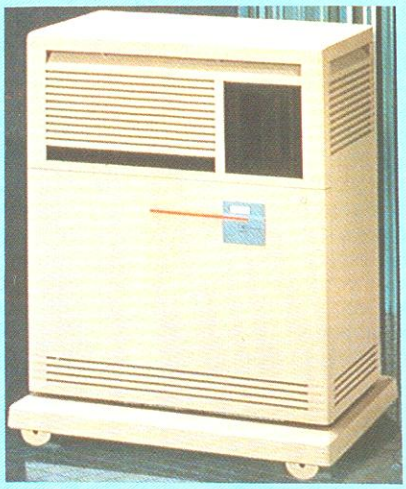
See pages 16/17.



DECsystem 5100

A competitively priced new entry-level RISC/ ULTRIX based system that's powerful, easy-to-use and is packed into one neat desktop enclosure.

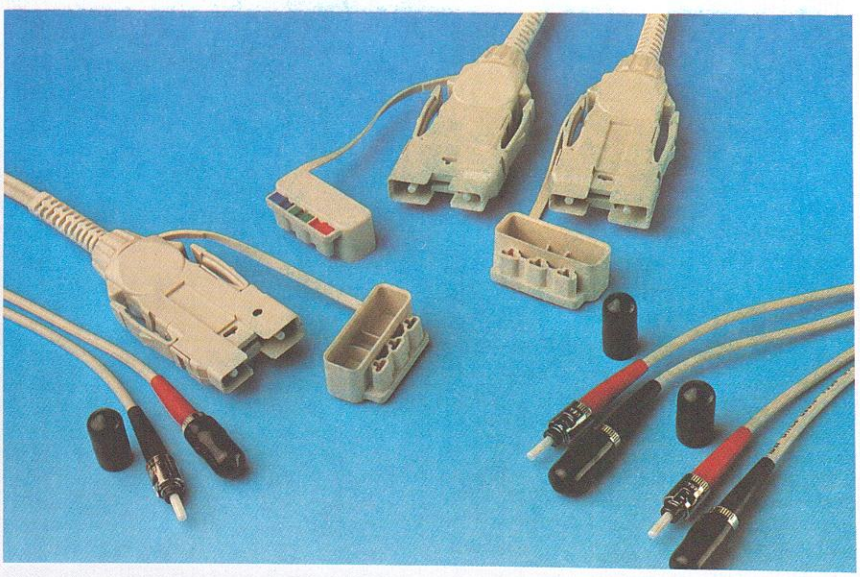
See page 32.



DECsystem 5500

With a rating of 21.5 SPECmarks, this latest ULTRIX-based RISC computer, offers considerably faster I/O than the DECsystem 5400 making it ideal for large capacity, multi-user applications.

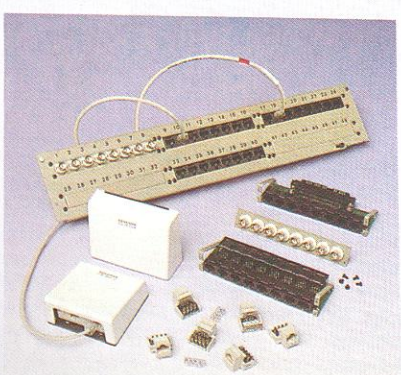
See page 33.

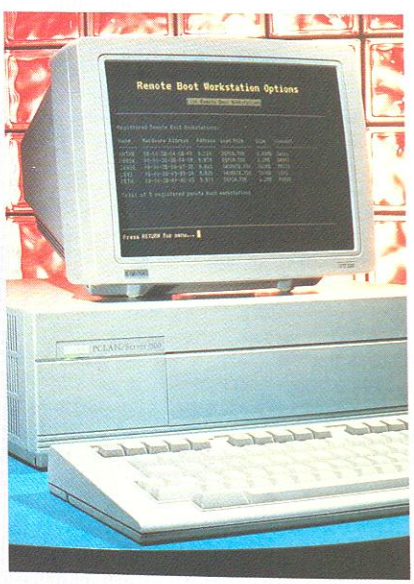


OPEN DECconnect

Digital's new multivendor cabling system that supports FDDI, Ethernet, EIA423, EIA232 and ISDN.

See page 56/57.



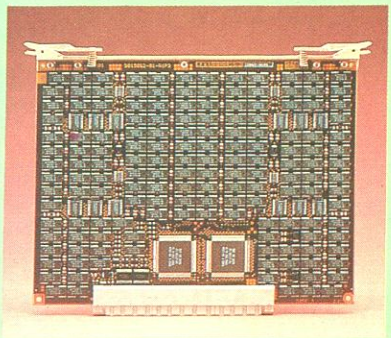


PATHWORKS Server 3100e

The perfect server for small business or departmental PC integration, the PATHWORKS server 3100e can integrate up to 64 PCs.

See page 50.

Newly Introduced



Memory

Additional memory for your new Digital workstations and systems: VAXstation 3100 Model 76, DECsystem 5100, VAX 6000 Models 200/ 300/400/500, DECsystem 5500 and VAX 4000 Model 300.
See pages 136/138.

TZK10 Tape Drive

A 320/525 Mb Quarter Inch Cartridge (QIC) tape-drive – perfect for unattended back-up for small systems.
See page 135.

Disk Drives

Five new disk drive options have been introduced. Three are based on the 1 Gb RF72 ISE and are available in an expansion pedestal or for mounting in BA200 or BA400 series enclosures. Plus two SCSI devices, 665 Mb and 1 Gb for BA400 enclosures.
See pages 129/132.

KZQSA Adapter

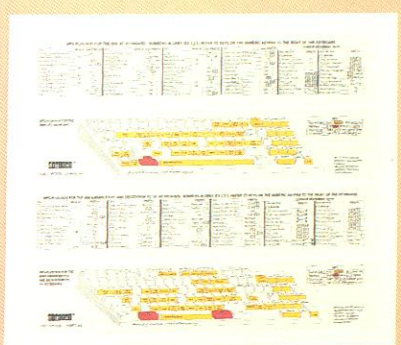
Links TLZ04 tape drives and the RRD40 CDROM to all Q-bus MicroVAX systems, for fast, reliable, unattended back-up.
See pages 132/133.

Floppy Disk Cleaning Kits

Don't take chances – clean disk drives give better performance. Kits available for 8", 5¼" and 3½".
See page 117.

TZK10 Cleaning Kit

Keeps your TZK10 in peak condition. Easy to use, each kit sufficient for 50 cleanings.
See page 117.

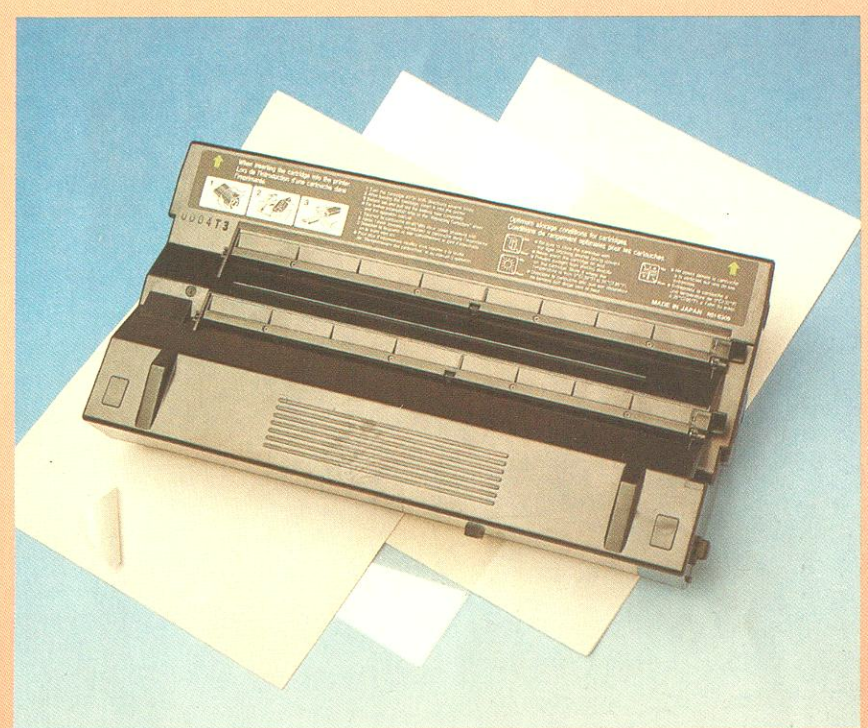


IBM Keyboard Template

Simple devices just rest at the top of non-Digital keyboards for quick and easy access to WPS-PLUS/DOS commands.
See page 101.

TLZ04 Cleaning Cartridge

Specially produced to keep your TLZ04 drive at maximum efficiency.
See page 117.



DECIaser Starter Kit

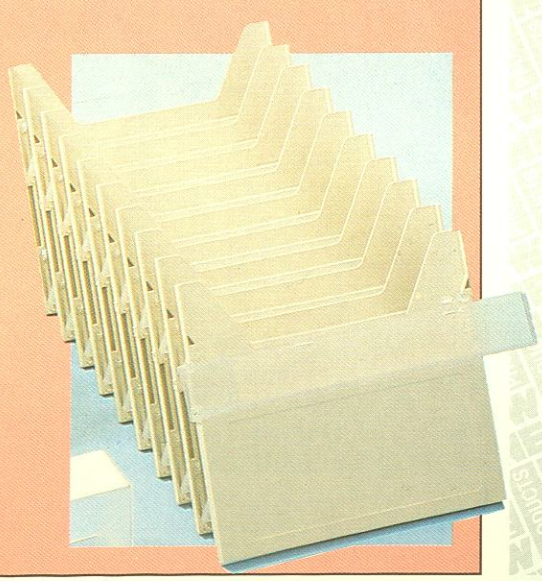
Cost effective kit – order with your new DECIaser printer. Contains paper, labels, transparencies and supply cartridges.
See page 78 and 102.

TZK10 Cartridge Tapes

Two new tapes for the TZK10 drives – choice of 300 Mb or 525 Mb capacity.
See page 120.

Concertina Floppy Storage Box/File

A highly useful storage box that provides quick reference, which sits on your desktop or folds to fit in your briefcase. Holds 10 5¼" diskettes.
See page119.



Section Index

10/13	DECstation Personal Computers
20/21	DECstation 2100
20/21	DECstation 3100
22/23	DECstation 5000 Model 200
32	DECsystem 5100
33	DECsystem 5500
24/25	MicroSystem Selection Guide
26/27	MicroVAX 3100
28/29	MicroVAX 3300
28/29	MicroVAX 3400
9	Personal Computer Selection Guide
30/31	VAX 4000 Model 300
28/29	VAXserver 3300
28/29	VAXserver 3400
16/19	VAXstation 3100
14/15	Workstation Selection Guide

Viewpoint

The number of small systems you order through this catalogue increases with every issue, as does the choice of systems (two now ones this time).

As part of Digital's policy to become THE provider of quality Open Systems Solutions, we have expanded our Merchandising Group to provide extra focus on our DECstation range of RISC/ UNIX and Personal Computer products.

Our increasing commitment to the ever growing number of VAX and VAXstation customers, sees the introduction to this catalogue of the new VAXstation 3100 model 76; which at an enormous 6.6 SPECmarks, is the most powerful VAXstation to date.

Of interest to UNIX users, is the new DECsystem 5500, the fastest NFS server in the industry today and an extremely powerful multi-user system.

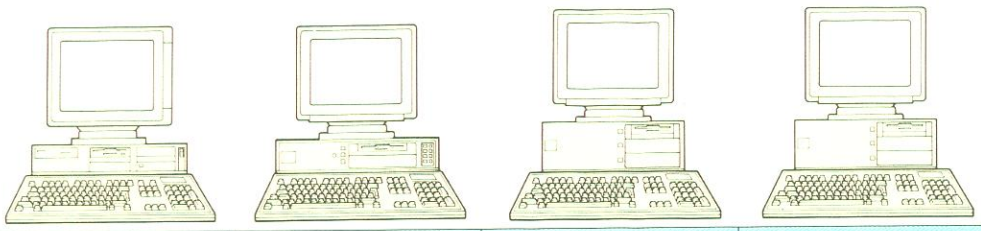
Helping your business is our business, and if you feel that I can be of any help, please 'phone or write to me.

Yours sincerely

Tony Stirrup
UNIX and PC
Merchandising Manager

Personal Computer Selection Guide

Use this guide to help select the PC best suited to your application



	DECstation 220	DECstation 300	DECstation 325	DECstation 425
Central Processing Unit (CPU)	80286	80386SX	80386	80486
Floating Point Unit (FPU)	80287 optional	80387SX optional	80387 optional	80487 optional
Clock Speed	12 MHz	16 MHz	25 MHz	25 MHz
Monochrome Monitor	12″ VGA Paper white giving 64 shades of grey			
Colour Monitor	14″ VGA (Resolution 640 × 480)			
High Resolution Colour	N/A	N/A	15″ Dual Frequency VGA+ (Resolution 1024 × 768)	
Keyboard	120 Key UK PC style or 'Gold Key' LK250			
Memory	1 Mb to 14 Mb	2 Mb to 12 Mb	2 Mb to 18 Mb	4 Mb to 18 Mb
Local Disk Storage*	Diskless, 1.44 Mb Floppy, 0/20/40 Mb Hard Disk	1.44 Mb Floppy, 0/40/100 Mb Hard Disk	1.44 Mb Floppy, 100/200 Mb Hard Disk	1.44 Mb Floppy, 100/200/300 Mb Hard Disk
5¼″ Floppy Disk	N/A	Optional		
Local Tape Streamer	40 Mb	40/80 Mb	80 Mb	80/150 Mb
Free Slots (full length)	3 × 16	2 × 16, 3 × 8	5 ISA	4 EISA
Maximum Number of Devices	3	3	4	4
Operating System	MS-DOS V3.3 or V4.0 MS-OS/2	MS-DOS V3.3 or V4.0, MS-OS/2 V1.1 or SCO Open Desktop		
Networking Software	PATHWORKS for DOS	PATHWORKS for DOS, PATHWORKS for OS/2 Server or Client		
Ethernet	DEC EtherWORKS			
RS232	Yes			
Parallel	Yes			

* Incorporation into a PCSA environment gives any IBM compatible PC, including the DECstation PCs access to virtually unlimited storage

Dimensions, Weights and Power:

Systems Enclosure

	DECstation 220		DECstation 300		DECstation 325		DECstation 425	
Height:	4.3″	(109 mm)	5.8″	(147 mm)	6″	(152 mm)	6.4″	(162 mm)
Width:	16.2″	(412 mm)	14.1″	(358 mm)	15.9″	(402 mm)	15.5″	(393 mm)
Depth:	15.5″	(393 mm)	15.5″	(394 mm)	16.5″	(420 mm)	17.9″	(454 mm)
Weight:	20 lbs	(9 kg)	27.5 lbs	(12.5 kg)	27.6 lbs	(12.5 kg)	32 lbs	(14.5 kg)
Line Voltage:	240V a.c.		240V a.c.		240V a.c.		240V a.c.	

Display Monitors

12″ Monochrome		14″ Colour		15″ Colour	
12.4″	(315 mm)	14.2″	(360 mm)	15″	(380 mm)
13.4″	(340 mm)	14.6″	(370 mm)	16″	(406 mm)
11.8″	(300 mm)	15″	(380 mm)	15″	(380 mm)
13.2 lbs	(6 kg)	35.2 lbs	(16 kg)	40 lbs	(18 kg)

Personal Computers

DECstation PCs give you Digital integrity and networking versatility

Now you can choose from a range of four Digital PCs that can operate as standalone workstations or be integrated into your new or existing systems.

Whatever your application, whatever your current operating system, the introduction of the DECstation PC family means you can now select a totally integrated Digital solution for virtually any computing need. And because they run the MS-DOS operating system by Microsoft, you have the choice of literally thousands of software applications.

DECstation PCs are fully participating members of Digital's networked environment, therefore the print, file and applications capabilities of larger Digital systems can be integrated with the familiar industry-standard personal computer. Using Digital's high-performance Ethernet controller and PC integration package, any VAX computer can operate as a server for the DECstation PC.

Features

Choice of base system with storage provided by a single floppy disk or a floppy disk in conjunction with a Winchester disk
Based on industry-standard Intel 80286, 80386 and 80486 chips
Support for Digital's award-winning PC Integration software, VMS Services for PCs
Support for Digital's nigh-performance PC-networking Ethernet adapter (EtherWORKS)
PC-DOS and MS-DOS media and application compatibility
VGA high-resolution graphics
Backed by Digital's advanced network expertise to take advantage of the power of larger host systems
Ideal for use in work groups with Digital's PATHWORKS Server 3100 or any other VAX system running PATHWORKS
Serial and parallel printer ports are standard

DECstation PC configuration and expansion

Storage: Each DECstation can accommodate a maximum of one floppy disk, one additional floppy or hard disk and one streamer tape.

Memory: All DECstation PCs follow the same expansion rules. You must first upgrade the system memory. Next add the first memory board, and then populate it to its maximum capacity. Further boards can then be added in this way until the maximum possible is reached. See table.

Keyboard: Choose either the PC style PC6XL-AE/CE, or, for easy integration with WPS Plus or an ALL-IN-1 environment, the LK250-PA. The appropriate keyboard cable is included with the system box (DECstation 220/300) or with the keyboard (PC6XL-CE).

Model	Standard with System	System Expansion	Additional Boards	Board Expansion	Maximum Possible
DECstation 220	1 Mb	+1 Mb PC64M-BA	+2 Mb PC64M-AA	+2 Mb PC64M-AB	14 Mb
DECstation 300	2 Mb	+2 Mb PC62M-BA	+2 Mb PC62M-AA	+2 Mb PC62M-AB	12 Mb
DECstation 325	2 Mb	+4 Mb PC6XM-AB (max 2)	+4 Mb PC66M-AA	+4 Mb PC6XM-AB	18 Mb
DECstation 425	2, 4, 8 Mb		Call Technical Support		18 Mb (Currently)

Note: additional memory for the DECstation 220 will only act as extended not expanded memory

Personal Computers

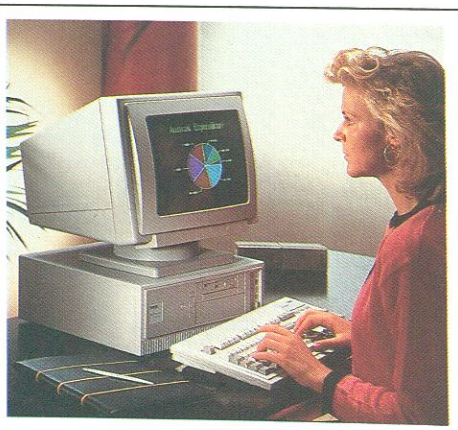
DECstation 220 DECstation 300

Two entry level PCs that combine industry compatibility with Digital's networking capabilities

DECstation 220

The 12 MHz low cost industry-compatible PC

The DECstation 220 is the entry-level, industry-standard PC which can handle all of today's MS-DOS V3.3/V.4 applications.



It operates as a fully participating member of your computer network, which means complete application integration with other PCs and larger Digital systems.

Another advantage is that the DECstation can grow, by expanding the memory to 14 Mb, to suit your changing business requirements. You also have a wide choice of peripherals like companion printers and streamer tapes.

DECstation 220 Preconfigured Systems

80286 12 MHz 1 Mb Memory

VGA 12" Mono	Standalone System 20 Mb Disk	Network System 3 1/2" Floppy
System Box	PC645-A3	PC640-A3
Keyboard	PC6XL-AE	LK250-PA
Monitor	PC6XV-A3	PC6XV-A3
MS-DOS	PC6XQ-AA	PC6XQ-AA
Power Cord	PC6XC-AE	PC6XC-AE
Ethernet Board	N/A	DE100-AA
Mouse	N/A	PC64S-AA

Features

12 MHz Intel 80286 microprocessor

3½" floppy disk, stores 1.44 Mb on a single disk

Virtual immunity from 'viruses' with diskless system and PCSA

1 Mb RAM standard

Ideal for use in work groups with a range of Digital servers (such as the PATHWORKS Server 3100)

12" monochrome or 14" colour monitor, both with tilt/swivel base

VGA graphics offering 256 colours from a palette of 256,000 (or up to 64 shades of grey)

Industry-standard UK keyboard or Digital 'Gold Key' style

Starter kit

DECstation 300

The mid range PC with extra power

The DECstation 300 gives you 32-bit processing power, and, thanks to the standard 16 bit external bus, you get extra power at a more affordable price.

This powerful industry-compatible PC runs todays MS-DOS, OS/2 and SCO Open Desktop applications.

A wide selection of options includes a maths co-processor, memory expansion and various storage devices so you can configure your system precisely to suit your needs.

With the optional 5¼" floppy disk and WPS-PLUS/DOS Software, this machine offers you a most cost-effective upgrade path from DECmate word processors.

Features

16 MHz Intel 80386SX microprocessor

Built-in 3½" floppy disk, stores 1.44 Mb on a single disk

Choice of hard disk

2 Mb RAM standard

Ideal for use in work groups with a range of Digital servers (such as the PATHWORKS Server 3100)

12" monochrome or 14" colour monitor, both with tilt/swivel base

VGA graphics offering 256 colours from a palette of 256,000 (or up to 64 shades of grey)

Industry-standard UK keyboard or Digital 'Gold Key' style

Starter kit

DECstation 220/300 Accessories and Supplies

Printers	**Pages 73/81**
Diskettes	**Page 118**
Cables	**Pages 53/63**
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**

DECstation 220/300 Volume discount

You may be able to take advantage of our volume discounts – ☎ for more information.

Dimensions and Weights:

See Personal Computer Selection Guide on page 9.

DECstation 300 Preconfigured Systems

80386SX 16 MHz 2 Mb Memory

VGA 14" Colour	Standalone System 40 Mb Disk	Network System 3½" Floppy
System Box	PC625-A3	PC620-A3
Keyboard	PC6XL-AE	LK250-PA
Monitor	PC6XV-B3	PC6XV-B3
MS-DOS	PC6XQ-AA	PC6XQ-AA
Power Cord	PC6XC-AE	PC6XC-AE
Ethernet Board	N/A	DE100-AA
Mouse	N/A	PC64S-AA

Part No.		Description	Price £
System Box			
PC641-A3	O	DECstation 220 1 Mb Memory Diskless	782.50
PC640-A3	O	DECstation 220 1 Mb Memory 3½" Floppy	928.80
PC645-A3	O	DECstation 220 1 Mb Memory 3½" Floppy 20 Mb Disk	1146.00
PC646-A3	O	DECstation 220 1 Mb Memory 3½" Floppy 40 Mb Disk	1327.00
PC620-A3	O	DECstation 300 2 Mb Memory 3½" Floppy	1821.00
PC625-A3	O	DECstation 300 2 Mb Memory 3½" Floppy 40 Mb Disk	2166.00
PC626-A3	O	DECstation 300 2 Mb Memory 3½" Floppy 100 Mb Disk	2545.00
Options			
PC6XV-A3	O	12" Monochrome Monitor	163.50
PC6XV-B3	O	14" Colour Monitor	472.00
PC6XL-AE	O	PC Style Keyboard (cable with system)	130.40
LK250-PA	C	Gold Key Keyboard (includes cable)	227.50
PC6XC-AE	O	Power Cord	13.80
PC64M-AA	i	DECstation 220 2 Mb Additional Memory Board	634.70
PC64M-AB	i	DECstation 220 2 Mb Memory Board Expansion	448.90
PC64M-BA	i	DECstation 220 1 Mb System Memory Expansion	405.60
PC64P-AA	i	DECstation 220 80287 Co-processor	250.00
PC64R-AA	i	DECstation 220 3½" Floppy Disk	121.40
PC64R-BA	i	DECstation 220 20 Mb Disk	476.80
PC64R-CA	i	DECstation 220 40 Mb Disk	563.00
PC64S-AA	O	DECstation 220 2 Button Mouse	113.90
PC64T-AA	i	DECstation 220 40 Mb Streamer	412.60
PC62M-AA	i	DECstation 300 2 Mb Additional Memory Board	565.80
PC62M-AB	i	DECstation 300 2 Mb Memory Board Expansion	400.20
PC62M-BA	i	DECstation 300 2 Mb System Memory Expansion	527.20
PC62P-AA	i	DECstation 300 80387SX Co-processor	392.60
PC62R-AA	i	DECstation 300 3½" Floppy Disk	188.40
PC62R-BA	i	DECstation 300 5¼" Floppy Disk	188.40
PC62R-CA	i	DECstation 300 40 Mb Disk	563.00
PC62R-DA	i	DECstation 300 100 Mb Disk	1432.00
PC64S-AA	O	DECstation 300 2 Button Mouse	113.90
PC62T-AA	i	DECstation 300 40 Mb Streamer	412.60
PC62T-BA	i	DECstation 300 80 Mb Streamer	574.80
Software			
PC6XQ-AA	C	MS-DOS V3.3 Operating System	56.60
PC6XQ-BA	C	MS-DOS V4.01 Operating System	96.60
PC6XQ-DA +	C	MS-OS/2 V1.1	351.90

+ Note: OS/2 requires a minimum of 4 Mb of memory

Personal Computer

DECstation 325

The high performance Digital PC

A compact PC with the power of a 25 MHz Intel 80386 microprocessor uses advanced technology to give a high performance PC at a competitive price.

The DECstation 325 is the perfect choice for anyone with highly compute-intensive applications.

The DECstation 325 runs MS-DOS V3.3, MS-DOS V4.01, MS-OS/2, and SCO Open Desktop.

The DECstation 325 can work as part of a comprehensive network system with other PCs or with larger Digital systems. So now you can fully integrate Digital quality industry-compatible PCs with existing Digital workstations, terminals, printers and multi-processing time-sharing systems.

DECstation 325 Preconfigured System

Part No.	Description
PC665-A3	System Box
PC6XL-CE	Keyboard
PC6XV-E3	Monitor
PC6XQ-BA	MS-DOS V4.01
PC6XC-AE	Power Cord
DE100-AA	Ethernet Board
PC6XS-AA	Mouse

Dimensions and Weights:

See Personal Computer Selection Guide on page 9.

DECstation 325 Volume discount

You may be able to take advantage of our volume discounts – ☎ for more information.

Features

- Intel 80386 25 MHz zero wait states microprocessor
- Cache memory 32 Kb
- 2 Mb memory included as standard
- Built in 3½" floppy
- Choice of diskless, 100 or 200 Mb hard disk base systems
- 5 ISA expansion slots available
- Uses the new 15" Colour VGA + monitor
- Can be integrated using the new EtherWORKS – Ethernet controller
- Choice of industry-standard MS-DOS, MS-OS/2, SCO Open Desktop or SCO UNIX
- Using PATHWORKS for OS/2 can be configured as a server in a PCSA environment

DECstation 325 Accessories and Supplies

Printers	Pages 73/93
Diskettes	Page 118
Cables	Pages 53/63
Cleaning Products	Pages 116/117
Keyboxes for Media Storage	Pages 118/119

Part No.		Description	Price £
System Box			
PC661-A3	O	DECstation 325 2 Mb RAM Diskless	2627.00
PC665-A3	O	DECstation 325 2 Mb RAM 3½" Floppy 100 Mb Disk	3330.00
PC666-A3	O	DECstation 325 2 Mb RAM 3½" Floppy 200 Mb Disk	3933.00
Options			
PC6XV-A3	O	12" Monochrome Monitor (VGA)	163.50
PC6XV-B3	O	14" Colour Monitor (VGA)	472.00
PC6XV-E3	O	15" High Resolution Colour Monitor (VGA/VGA+)	945.30
PC6XL-CE	C	PC Style Keyboard (includes cable)	113.90
LK250-PA	C	Gold Key Keyboard	227.50
PC6XC-AE	O	Power Cord	13.80
PC6XM-AB	I	1 Mb System Memory Expansion	426.00
PC6XM-CB	I	4 Mb System Memory Expansion	1093.00
PC66M-AA	I	Memory Expansion Module – Plus 4 Mb of Memory	1530.00
PC6XR-FA	I	3½" Additional Floppy Disk	121.40
PC6XR-EA	I	5¼" Floppy Disk	200.10
PC6XR-DB	I	100 Mb Disk	1049.00
PC6XR-EB	I	200 Mb Disk	1884.00
PC6XT-BB	I	80 Mb Cartridge for 80 Mb Tape Drive	607.20
PC6XT-BA	I	80 Mb Streamer Tape Drive	49.10
PC6XT-CA	I	120 Mb Cartridge for 80 Mb Tape Drive	49.10
DE100-AA+	C	DEC EtherWORKS LC	222.70
Software			
PC6XQ-AA	C	MS-DOS V3.3 Operating System	56.60
PC6XQ-BA	C	MS-DOS V4.01 Operating System	96.60
PC6XQ-DA	C	MS-OS/2 V1.1	351.90
QB-YN8EW-VA	C	SCO Open Desktop	895.00

+ Note: the DEC EtherWORKS LC card is not yet supported by SCO Open Desktop. The introduction of this product, available for SCO software is planned for later this year. If, however, you have a requirement for an Ethernet card for those operating environments now, please ☎.

Personal Computer

DECstation 425

The High Performance Based 486 Power System

The DECstation 425 is the new high-end extension to our family of Intel-based Systems, with a SPECmark rating of 8.7, it has a variety of uses. Using either MS-DOS or MS-OS/2, the DECstation 425 can be configured as a powerful single user PC, and integrated using suitable PCSA client products.

In conjunction with the new PATHWORKS OS/2 Server software the DECstation 425 can be configured as a server in a PCSA environment.

With the arrival of the Santa Cruz Operation range of products the DECstation 425 can be turned into a fully operational workstation using Open Desktop or a multiuser system using SCO UNIX.

Features

- Intel 80486 25 MHz microprocessor
- 8 Kb cache
- At least 4 Mb memory as standard, expandable to 18 Mb
- Choice of 100, 200, 300, 600 Mb hard disks
- Four free full length EISA slots
- Using the new 15″ colour VGA+ monitor gives high resolution (1024 × 768) graphics capability
- Can be integrated using the new high speed EtherWORKS – Ethernet controller
- Choice of industry-standard MS-DOS V3.3 or V4.01, MS-OS/2 V1.1, SCO Open Desktop or SCO UNIX

DECstation 425 Accessories and Supplies

Printers	**Pages 73/93**
Diskettes	**Page 118**
Cables	**Pages 53/63**
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**

DECstation 425 Preconfigured System

Part No.	Description
PC675-A3	System Box
LK250-PE	Keyboard
PC6XV-B3	Monitor
PC6XC-AE	Power Cord
PC6XM-CC	Extra 2 Mb Memory
DE100-AA	Ethernet Board
PC6XQ-DA	MS-OS/2
QL-YFWAW-AA	Server Licence
QA-YFWAA-HC	Media and Documentation

Dimensions and Weights:

See Personal Computer Selection Guide on page 9.

DECstation 425 Volume discount

You may be able to take advantage of our volume discounts – ☎ for more information.

Part No.		*Description*	*Price £*
System Box			
PC675-A3	O	DECstation 425 4 Mb RAM 3½″ Floppy 100 Mb Disk	7784.00
PC676-A3	O	DECstation 425 6 Mb RAM 3½″ Floppy 200 Mb Disk	8856.00
PC677-A3	O	DECstation 425 8 Mb RAM 3½″ Floppy 300 Mb Disk	9913.00
Options			
PC6XV-A3	O	12″ Monochrome Monitor (VGA)	163.50
PC6XV-B3	O	14″ Colour Monitor (VGA)	472.00
PC6XV-E3	O	15″ High Resolution Colour Monitor (VGA/VGA+)	945.30
PC6XL-CE	C	PC Style Keyboard (includes cable)	113.90
LK250-PA	C	Gold Key Keyboard	227.50
PC6XC-AE	O	Power Cord	13.80
PC6XM-DA	I	2 Mb System Memory Expansion	600.30
PC6XM-DB	I	4 Mb System Memory Expansion	1152.00
PC6XR-FA	I	3½″ Additional Floppy Disk	121.40
PC6XR-EA	I	5¼″ Floppy Disk	200.10
PC6XR-BC	I	100 Mb Disk SCSI	1049.00
PC6XR-CC	I	200 Mb Disk SCSI	1884.00
PC6XR-DC	I	300 Mb Disk SCSI	2981.00
PC6XR-EC	I	600 Mb Disk SCSI	4444.00
PC6XT-BB	I	80 Mb Cartridge for 80 Mb Tape Drive	607.20
PC6XT-CB	I	150 Mb Streamer SCSI Drive	1125.00
PC6XT-BA	I	80 Mb Streamer Tape Drive	49.10
PC6XT-CA	I	120 Mb Cartridge for 80 Mb Tape Drive	49.10
PC6XT-DA	I	150 Mb Streamer Tape	45.30
Software			
PC6XQ-AA	C	MS-DOS V3.3 Operating System	56.60
PC6XQ-BA	C	MS-DOS V4.01 Operating System	96.60
PC6XQ-DA	C	MS-OS/2 V1.1	351.90
QB-YN8EW-VA	C	SCO Open Desktop	895.00
QB-YN2EW-VA	C	SCO UNIX 2-User	525.00
QL-YFWAW-AA	C	PATHWORKS for OS/2	177.50
QA-YFWAA-HC	C	Media and Documentation Kit	326.00

Note: if your DECstation 425 will be used as an OS/2 server, you need to order the OS/2 operating software (PC6XQ-DA) as well as PATHWORKS for OS/2 server (QL-YFWAW-AA) and Media and Documentation Kit (QA-YFWAA-HC).
The DEC EtherWORKS LC card is not yet supported by SCO Open Desktop and UNIX. The introduction of this product available for SCO software is planned for later this year. If, however, you have a requirement for an Ethernet card for those operating environments now, please ☎

Workstation Selection Guide

Use this guide to help select the system best suited to your application

	VT1200 X Windows Terminal	VT1300 Colour X Windows Terminal	VAXstation 3100 Model 30/40	VAXstation 3100 Model 38/48	VAXstation 3100 Model 76
SPECmark Rating	CPU Power provided by Host		2.7	3.7	6.6
Central Processing Unit (CPU)	N/A		78034 CMOS VAX		DC 520
Floating Point Unit (FPU)	N/A		78134 standard		DC 523 standard
Monitor	15″ or 19″	19″	15″, 16″ or 19″		16″ or 19″
Monochrome/Grey Scale	Single plane	8 plane (256 shades)	Single plane or 8 plane (256 shades)		8 plane (256 shades)
Colour	N/A	8 plane (256 colours)			
Palette	N/A	16.7 million colours			
Resolution (Horizontal × Vertical)	15″ 1024 × 864 19″ 1280 × 1024	1280 × 1024	1024 × 864 or 1280 × 1024		
Keyboard	LK401/LK402 105 sculptured keys, typewriter style main array, editing keypad, numeric keypad, 20 special function keys		LK201 105 sculptured keys, typewriter style main array, editing keypad, numeric keypad, 20 special function keys		
Memory	2 to 4 Mb	8 Mb	8 to 32 Mb		
Local Disk Storage*	N/A		Diskless, 52 Mb to 2.3 Gb + CDROM		
Local Tape Storage*	N/A		95 Mb streamer		95 Mb streamer, 1.2 Gb DAT
Operating System	Hosted from VMS or ULTRIX (UNIX)		VMS or ULTRIX (UNIX)		VMS
Windowing System	DECwindows		DECwindows or VWS		
Networking s/w	LAT or TCP/IP	DECnet or TCP/IP	VAXcluster, DECnet/OSI, PATHWORKS, NFS, TCP/IP, LAT		
Ethernet	ThinWire standard	ThinWire and Thick standard			
Bus	None	None	SCSI		
Typical Application	Multiple Host Access CASE Publications	Electrical CAD/CAM Mechanical CAD/CAM	Laboratory data analysis	Seismic interpretation	Medical imaging Solid modelling

Most configurations of these systems are available through this catalogue.
For more information please

* Incorporation into a VAXcluster or NFS environment gives any VAXstation or DECstation access to virtually unlimited storage.

Performance is highly dependent on configuration, application and operating environment. Individual workloads should be carefully evaluated before making performance estimates for specific applications. In this chart no warranty of system performance is expressed or implied.

DECstation 2100	DECstation 3100	DECstation 5000 Model 200
8.3	11.3	18.5
MIPS R2000 CMOS RISC		MIPS R3000 CMOS RISC
MIPS R2010 standard		MIPS R3010 standard
16″ or 19″		
Single plane		8 plane (256 shades)
8 plane (256 colours)		8 or 24 plane (256 or 16.7 million colours)
16.7 million colours		
1024 × 864		1024 × 864 or 1280 × 1024
LK201 105 sculptured keys, typewriter style main array, editing keypad, numeric keypad, 20 special function keys		
8 to 24 Mb		8 to 120 Mb
Diskless, 105 Mb to 2.3 Gb + CDROM		Diskless to 17 Gb
95 Mb streamer		
ULTRIX (UNIX)		
DECwindows, OSF/MOTIF		
DECnet/OSI, NFS, TCP/IP		
ThinWire and Thick standard		ThinWire standard
SCSI		TURBOchannel, SCSI, VME, FDDI
		Molecular modelling Animation Visual simulation

Dimensions, Weights and Power:

System Enclosures

	DECstation 2100 DECstation 3100		DECstation 5000 Model 200	
Height:	4.1″	(103 mm)	3.6″	(92 mm)
Width:	18.3″	(464 mm)	20.1″	(510 mm)
Depth:	15.5″	(394.2 mm)	17.1″	(435 mm)
Weight:	20 lbs	(9.47 kg)	30 lbs	(13.6 kg)
Line Voltage:	240V a.c.		240V a.c.	
Consumption:	122W		359W	

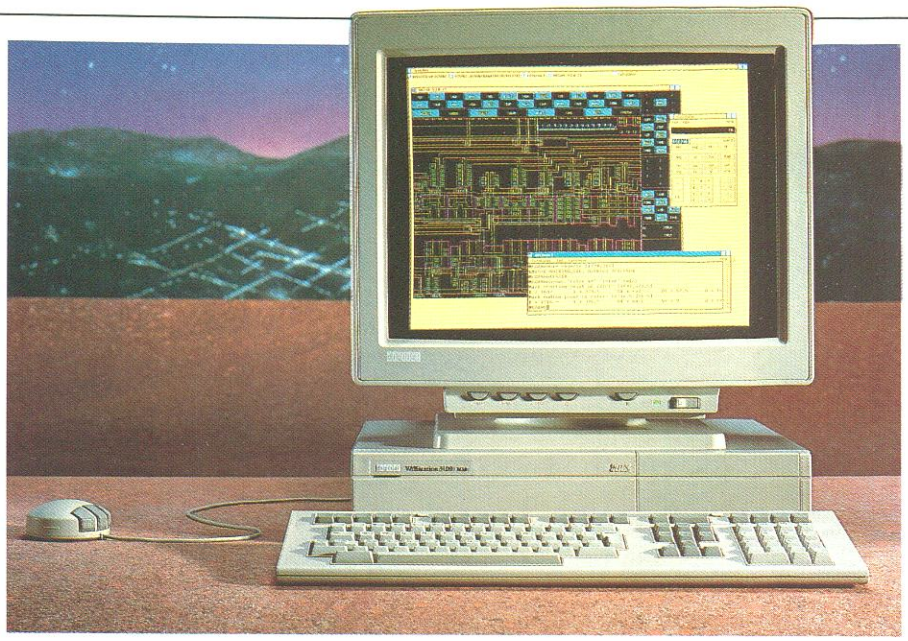
	VAXstation 3100 Model 30/38/76		VAXstation 3100 Model 40/48	
Height:	4.1″	(103 mm)	5.9″	(150 mm)
Width:	18.3″	(464 mm)	18.3″	(464 mm)
Depth:	15.5″	(394.2 mm)	15.8″	(400 mm)
Weight:	25 lbs	(11.4 kg)	45 lbs	(20.5 kg)
Line Voltage:	240V a.c.		240V a.c.	
Consumption:	190W		300W	

Display Monitors

	Monochrome 19″ (VR262)		15″ (VR150)		19″ (VR319)	
Height:	15.6″	(395 mm)	15.5″	(394 mm)	18″	(459 mm)
Width:	17.7″	(450 mm)	14.5″	(369 mm)	19.5″	(495 mm)
Depth:	16.9″	(430 mm)	15.9″	(403 mm)	16″	(401 mm)
Weight:	41 lbs	(18.6 kg)	36 lbs	(16.3 kg)	48 lbs	(21 kg)
Resolution:	78 dpi		108 dpi		160 dpi	

	Colour 19″ (VR299)		15″ (VR160)		19″ (VR320)	
Height:	18.5″	(470 mm)	15.5″	(394 mm)	18″	(457 mm)
Width:	19.9″	(506 mm)	14.5″	(369 mm)	19.5″	(495 mm)
Depth:	20.7″	(525 mm)	18″	(457 mm)	18″	(457 mm)
Weight:	71 lbs	(32 kg)	51 lbs	(23 kg)	63 lbs	(29 kg)
Resolution:	80 dpi		100 dpi		100 dpi	

	19″ (VRT19)		16″ (VR297)	
Height:	18.7″	(474 mm)	16″	(406 mm)
Width:	18.9″	(480 mm)	16″	(406 mm)
Depth:	19.9″	(505 mm)	17.8″	(450 mm)
Weight:	71.5 lbs	(32.5 kg)	64 lbs	(29 kg)
Resolution:	95 dpi		80 dpi	



VAXstation 3100

The leading price/ performance VAXstation family

The VAXstation 3100 family represents Digital's leading price/performance VAXstations. These low-cost VAX-based workstations are ideal for a whole range of commercial and technical applications. The number of software applications that the VAXstation 3100 systems can support is extensive and covers PC applications, like Lotus 1-2-3, as well as high performance 2D graphics used for CAD/CAM/CAE.

Access to thousands of applications

The VAXstation 3100 family gives you a choice. Systems can be configured as diskless network nodes, standalone workstations, or systems that can operate as a workstation and a server. Running Digital's VMS operating system, the VAXstation 3100 workstations give you access to over 6000 VMS applications. They can also run unmodified MS-DOS applications as well, and are ideal for use with Digital's DECwindows integrated Windowing. Using DECwindows you can display applications running on different hosts under different operating system software. With Digital's SPX graphics accelerator technology, the VAXstation 3100 family offers up to 10 times the graphics performance of previous entry-level VAX workstations.

The VAXstation 3100 family offers all these multi-user benefits plus the established advantages of VAX computing: compatibility, security and easy networking.

The VAXstation 3100 is packaged in a choice of compact system boxes with a minimum configuration of 8 Mbytes of memory, expandable to 32 Mbytes. The VAXstation 3100 is available with a single plane or 8 plane graphics co-processor and a choice of 15″ or 19″ monochrome, and 15″, 16″ or 19″ colour monitors.

SPX graphics processing hardware, available either as part of apackaged system, or as an upgrade to an existing system, boost the graphics capabilities of the VAXstation 3100 to set new standards for desktop systems.

With the VRT19 Trinitron monitor, SPX hardware gives 1280 × 1024 resolution with 66 Hz flicker-free refresh rate.

All VAXstation 3100s are equipped for either ThinWire or standard Ethernet connections allowing easy integration into a VAXcluster, NFS and/or DECnet network.

Each VMS VAXstation 3100 with a minimum of one RZ23 disk will have VMS and DECwindows ready installed at the factory, so you can be up and running in minutes.

The VAXstation 3100 supports Desktop VMS software which, with compact disk technology, brings a new level of simplicity to managing standalone or networked groups of workstations. Desktop VMS enables individuals with minimal system management experience to effectively manage their own systems or work groups. Desktop VMS media is packaged with all systems that include an RRD40.

There are preconfigured versions of the VAXstation 3100 to suit virtually every requirement, from the Model 30 with a SPECmark of 2.7 to the powerful Model 76 with a SPECmark 6.6, providing all the resources to form the heart of a VAXcluster of workstations.

VAXstation 3100 Model 76

New

Faster and twice the performance

The VAXstation 3100 Model 76 uses the latest 28 nanosecond CMOS VAX chip set, which, coupled with the 128 Kb of writeback cache, offers more than double the peak performance of previous VAXstation family members.

The Model 76 offers high quality graphics and the best price/ performance workstation in the VAXstation family. This latest VAXstation provides a unique combination of desktop VAX computing, industry-standard personal productivity tools and transparent access to distributed applications and resources.

Features

- Full VAX family compatibility
- Thousands of software applications immediately available
- Choice of 3 graphics options: monochrome, entry-level 8-plane colour, and high performance SPX 8-plane colour
- SPX provides up to 10 times the graphics performance of other VAXstation 3100s
- SPX gives high-resolution 1280 × 1024 display and 66 Hz flicker-free refresh rate
- Non-SPX models give 1024 × 864 display and 60 Hz refresh rate
- High performance CMOS-based central processor/floating point and two-level cache
- Flexible memory configurations
- Memory growth – 8 Mb to 32 Mb
- New Model 76 has Single In-line Memory Modules (SIMM)
- Full storage flexibility; diskless to 6.6 Gb
- Choice of 5 models
- Small Computer System Interface (SCSI) enables external expansion of industry-standard SCSI peripherals
- ThinWire or standard Ethernet networking

Optional MS-DOS software co-processor for unmodified PC applications
1 year warranty

Software

VMS licence includes DECwindows
VMS Workstation software (VWS) licence
DECnet E/N licence
VAXcluster licence
PATHWORKS for VMS licence

Configuration

Each VAXstation 3100 requires a country kit which includes power cables and keyboard. Although each configuration is complete it is simple to upgrade with external expansion boxes.

The VAXstation 3100 Model 30 can support a total of two half height disks and one RX23 floppy disk internally.

The VAXstation 3100 Model 38 can support up to three internal devices, though only one TZ30 or RX23 can be fitted.

The VAXstation 3100 Model 40/48 can support three 3½" half height disks (RZ22, RZ23, RZ24) and two 5¼" half height load devices (RRD40, TZ30) internally.

The VAXstation Model 76 can support three 3½" disk drives or two 3½" disk drives and one 1.44 Mb diskette drive.

If storage devices are required for a diskless Model 30/38 system a VS42D option must be purchased. Note: the number of external devices and internal SCSI devices cannot exceed seven in total.

A ThinWire Ethernet 'Tee' piece and two terminators are supplied. For connection to standard Ethernet (e.g. DELNI, H4005) a transceiver cable is required.

Dimensions and Weights:

See Workstation Selection Guide on pages 14/15.

VAXstations 3100 Configurations Guide

Choose the system to suit your needs.

Storage	8 Mb			
Monitor	**19" M**	**16" M**	**19" C**	**19" C SPX**
Model 30 (2.7 SPECmark)				
Diskless	PV010-BD	PV010-BM	PV010-BY	
RZ23	PV016-BD		PV016-BY	
RZ24, RX23		PV013-BM	PV013-BY	
2 x RZ23, RX23	PV012-BD	PV012-BM	PV012-BY	
2 x RZ23, RX23, RRD40	PV014-BD	PV014-BM	PV014-BY	
Model 38 (3.7 SPECmark)				
Diskless	PV110-BD	PV110-BM	PV110-BY	PV110-BJ
RZ23				
RZ24, RX23		PV113-BM	PV113-BY	
2 x RZ23, RX23	PV112-BD	PV112-BM	PV112-BY	PV112-BJ
2 x RZ23, RX23, RRD40	PV114-BD	PV114-BM	PV114-BY	
Model 76 (6.6 SPECmark)				
Diskless	PV410-BD			
RZ23				
RZ24, RX23				

Storage	12 Mb			
Monitor	**19" M**	**16" C**	**19" C**	**19" C SPX**
Model 30 (2.7 SPECmark)				
Diskless	PV010-CD	PV010-CM	PV010-CY	PV010-CJ
RZ23	PV016-CD	PV016-CM	PV016-CY	
RZ24, RX23				
2 x RZ23, RX23	PV012-CD	PV012-CM	PV012-CY	PV012-CJ
2 x RZ23, RX23, RRD40	PV014-CD	PV014-CM	PV014-CY	
Model 38 (3.7 SPECmark)				
Diskless	PV110-CD	PV110-CM	PV110-CY	PV110-CJ
RZ23	PV116-CD	PV116-CM	PV116-CY	PV116-CJ
RZ24, RX23				PV113-CJ
2 x RZ23, RX23	PV112-CD	PV112-CM	PV112-CY	PV112-CJ
2 x RZ23, RX23, RRD40	PV114-CD	PV114-CM	PV114-CY	
Model 76 (6.6 SPECmark)				
Diskless	PV410-CD			
RZ23	PV416-CD		PV416-CY	PV416-CJ
RZ24, RX23	PV413-CD		PV413-CY	PV413-CJ

Storage 16 Mb				
Monitor	**19" M**	**16" M**	**19" C**	**19" C SPX**
Model 40 (2.7 SPECmark)				
3 X RZ23, RRD40, TZ30	PV053-CD	PV053-BM	PV053-CY	
Model 48 (3.7 SPECmark)				
3 X RZ23, RRD40, TZ30	PV153-CD	PV153-CM	PV153-CY	

Standalone colour workstation with Desktop VMS and FORTRAN

Part No.	*Description*
PV053-CY	VAXstation 3100 Model 40 16 Mb, Colour 19", VMS
PV01K-AE	Country Kit
QL-100AC-AA	FORTRAN Licence
QA-100AA-H5	FORTRAN Media and Documentation

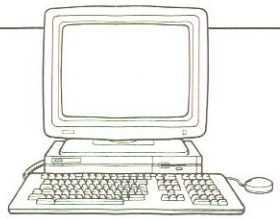
Monochrome VAXcluster satellite with Pascal and GKS

Part No.	*Description*
PV110-BD	VAXstation 3100 Model 38 8 Mb, Mono 19", VMS
PV11K-AE	Country Kit
QL-126AC-AA	Pascal Licence
QL-810AC-AA	GKS Licence

VAXstation 3100 Accessories and Supplies

Printers	**Pages 73/93**
Diskettes	**Page 118**
Tapes	**Pages 120/121**
Software *(Refer to DECdirect Software Catalogue)*	
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**
Networking Components	**Page 34**

VAXstation 3100 System Selection Guide



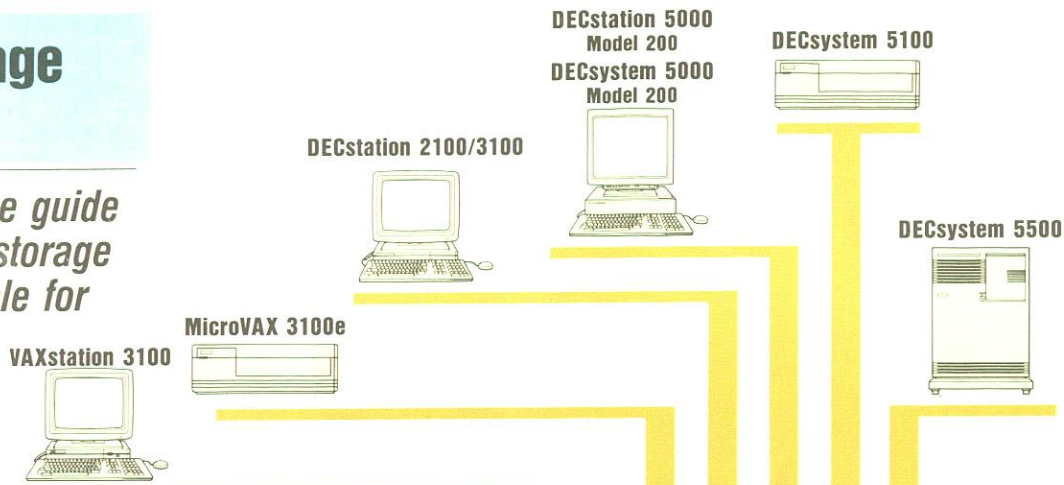
Part No.	Description	Price £
2.7 SPECmark Systems — Model 30 8 Mb		
PV010-BD	Diskless/19″ (M)	4603.00
PV010-BM	Diskless/16″ (C)	7020.00
PV010-BY	Diskless/19″ (C)	8976.00
PV016-BD	RZ23/19″ (M)	6591.00
PV016-BY	RZ23/19″ (C)	10960.00
PV012-BD	2 × RZ23, RX23/19″ (M)	7902.00
PV012-BM	2 × RZ23, RX23/16″ (C)	10320.00
PV012-BY	2 × RZ23, RX23/19″ (C)	12270.00
PV013-BM	RZ24, RX23/16″ (C)	10320.00
PV013-BY	RZ24, RX23/19″ (C)	12270.00
PV014-BD	2 × RZ23, RX23, RRD40/19″ (M)	9174.00
PV014-BM	2 × RZ23, RX23, RRD40/16″ (C)	11590.00
PV014-BY	2 × RZ23, RX23, RRD40/19″ (C)	13550.00
2.7 SPECmark Systems — Model 30 12 Mb		
PV010-CD	Diskless/19″ (M)	5398.00
PV010-CM	Diskless/16″ (C)	7815.00
PV010-CY	Diskless/19″ (C)	9771.00
PV010-CJ	Diskless/SPX 19″ (C)	9771.00
PV016-CD	RZ23/19″ (M)	7386.00
PV016-CM	RZ23/16″ (C)	9802.00
PV016-CY	RZ23/19″ (C)	11760.00
PV012-CD	2 × RZ23, RX23/19″ (M)	8697.00
PV012-CM	2 × RZ23, RX23/16″ (C)	11110.00
PV012-CY	2 × RZ23, RX23/19″ (C)	13070.00
PV012-CJ	2 × RZ23, RX23/SPX 19″ (C)	13150.00
PV014-CD	2 × RZ23, RX23, RRD40/19″ (M)	10130.00
PV014-CM	2 × RZ23, RX23, RRD40/16″ (C)	12550.00
PV014-CY	2 × RZ23, RX23, RRD40/19″ (C)	14340.00
2.7 SPECmark Systems — Model 40 16 Mb		
PV053-CD	3 × RZ23, RRD40, TZ30/19″ (M)	13860.00
PV053-BM	3 × RZ23, RRD40, TZ30/16″ (C)	17120.00
PV053-CY	3 × RZ23, RRD40, TZ30/19″ (C)	18240.00
3.7 SPECmark Systems — Model 38 8 Mb		
PV110-BD	Diskless/19″ (M)	6193.00
PV110-BM	Diskless/16″ (C)	8610.00
PV110-BY	Diskless/19″ (C)	10570.00
PV110-BJ	Diskless/SPX 19″ (C)	10570.00
PV112-BD	2 × RZ23, RX23/19″ (M)	9453.00
PV112-BM	2 × RZ23, RX23/16″ (C)	12110.00
PV112-BY	2 × RZ23, RX23/19″ (C)	14060.00
PV112-BJ	2 × RZ23, RX23/SPX 19″ (C)	14060.00
PV113-BM	RZ24, RX23/16″ (C)	12110.00
PV113-BY	RZ24, RX23/19″ (C)	14060.00
PV114-BD	2 × RZ23, RX23, RRD40/19″ (M)	10960.00
PV114-BM	2 × RZ23, RX23, RRD40/16″ (C)	13380.00
PV114-BY	2 × RZ23, RX23, RRD40/19″ (C)	15340.00
3.7 SPECmark Systems — Model 38 12 Mb		
PV110-CD	Diskless/19″ (M)	6988.00
PV110-CM	Diskless/16″ (C)	9405.00
PV110-CY	Diskless/19″ (C)	11360.00
PV110-CJ	Diskless/SPX 19″ (C)	11360.00
PV116-CD	RZ23/19″ (M)	8976.00
PV116-CM	RZ23/16″ (C)	11390.00
PV116-CY	RZ23/19″ (C)	13350.00
PV116-CJ	RZ23/SPX 19″ (C)	13350.00
PV112-CD	2 × RZ23, RX23/19″ (M)	10490.00
PV112-CM	2 × RZ23, RX23/16″ (C)	12900.00
PV112-CY	2 × RZ23, RX23/19″ (C)	14860.00
PV112-CJ	2 × RZ23, RX23/SPX 19″ (C)	14860.00
PV113-CJ	RZ24, RX23/SPX 19″ (C)	14860.00
PV114-CD	2 × RZ23, RX23, RRD40/19″ (M)	11760.00
PV114-CM	2 × RZ23, RX23, RRD40/16″ (C)	14170.00
PV114-CY	2 × RZ23, RX23, RRD40/19″ (C)	16130.00
3.7 SPECmark Systems — Model 48 16 Mb		
PV153-CD	3 × RZ23, RRD40, TZ30/19″ (M)	15450.00
PV153-CM	3 × RZ23, RRD40, TZ30/16″ (C)	18710.00
PV153-CY	3 × RZ23, RRD40, TZ30/19″ (C)	19830.00
6.6 SPECmark Systems — Model 76 8 Mb		
PV410-BD	Diskless/19″ (M)	9373.00
6.6 SPECmark Systems — Model 76 12 Mb		
PV410-CF	Diskless/19″ (M)	13430.00
PV413-CF	RZ24, RX23/19″ (M)	15730.00
PV413-CJ	RZ24, RX23/SPX 19″ (C)	17640.00
PV413-CY	RZ24, RX23/19″ (C)	17640.00
PV416-CF	RZ23/19″ (M)	14620.00
PV416-CJ	RZ23/SPX 19″ (C)	16530.00
PV416-CY	RZ23/19″ (C)	16530.00
Options		
PV01K-AE	D Keyboard and Power Cord for Model 30/40	174.90
PV11K-AE	D Keyboard and Power Cord for Model 38/48	174.90
PV41K-AE	D Keyboard and Power Cord for Model 76	174.90
VSXXX-AB	G Graphics Tablet	905.50
MS42-KA	I 8 Mb Expansion Memory with Adapter	1590.00
MS42-BA	I 12 Mb Expansion Memory	2385.00
MS42-CA	I 16 Mb Expansion Memory with Adapter	3180.00
MS44-AA	I 4 Mb SIMM Memory for Model 76	1113.00
BC19S-10	Colour Monitor Cable, 10 ft for Model 30/38	51.70
BC18P-10	Monochrome Monitor Cable, 10 ft for Model 30/38	20.70
IEZ11-AB	D IEEE488 I/O Interface	1629.00
E0-BN19A-2E	Power Cable (for above)	6.90
BN01A-02	IEEE488 Instrument Cable	72.80
Upgrades		
PV11U-AA	I Diskless Model 30 to Model 38 Kit	4770.00
PV11U-BA	I Other Pre-configured Model 30 to Model 38 Kit	5168.00
PV11U-CA	I A la carte Model 30 to Model 38 Kit	5168.00
PV15U-AA	I Model 40 to Model 48 Kit	5168.00
WS01X-GD	I SPX Graphics Upgrade, includes VRT19 High Resolution Monitor	6678.00
VS42D-JH	I SCSI Controller for Diskless M30/M38 (included with Model 76)	795.00
Software		
QA-09SAB-H5	G VMS Media & Base Documentation TK50	1252.00
QA-VV8AA-H8	G Desktop-VMS Media & Documentation CDROM	473.00
QA-A96AA-H5	G VWS Media & Documentation TK50	413.40
QA-VWJ8B-H8	G Consolidated Software Distribution CDROM & Base Documentation	552.50
QA-VYR8A-G8	G On-line Documentation CDROM	632.00

(M) = Monochrome Monitor (C) = Colour Monitor
All VAXstation 3100 Systems D Installable **For storage options see page 19.**

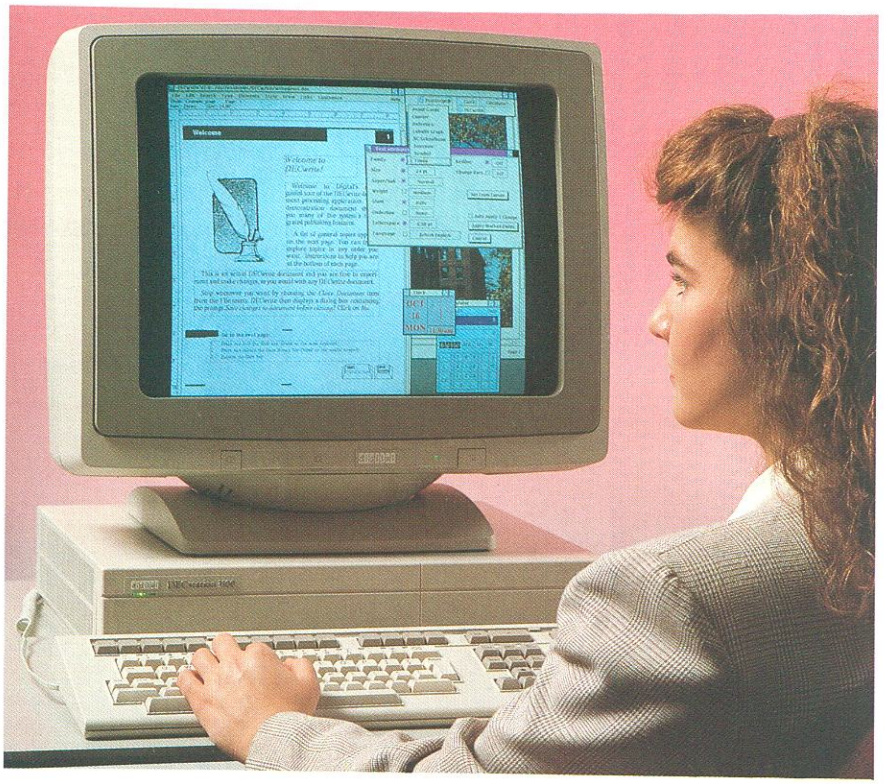
Note: in addition to the systems listed, a range of models with 15″ Monochrome or Colour monitors is available

SCSI Storage Guide

This at-a-glance guide details all the storage options available for SCSI systems



Part No.		Description	VAXstation 3100		MicroVAX 3100e	DECstation 2100/3100	DECstation 5000 Model 200 / DECsystem 5000 Model 200	DECsystem 5100	DECsystem 5500	Price £
Disks										
Internal										
RX23-EH	D	1.44 Mb 3½" Floppy	✓	(M30/38)	–	✓	–	–	–	477.00
RZ23-EF	I	104 Mb Disk	✓	(M30)	✓	–	–	✓	–	1193.00
RZ23-EH	D	104 Mb Disk	✓	(M38/76)	–	–	–	–	–	1193.00
RZ23-FF	I	104 Mb Disk	–		–	✓	–	–	–	1193.00
RZ24-EF	I	209 Mb Disk	✓	(M30)	✓	–	–	✓	–	1988.00
RZ24-EH	D	209 Mb Disk	✓	(M38/76)	–	–	–	–	–	1988.00
RZ24-FF	I	209 Mb Disk	–		–	✓	–	–	–	1988.00
RZ56E-AF	I	665 Mb Disk	–		–	–	–	–	✓	3896.00
RZ57E-AF	I	1 Gb Disk	–		–	–	–	–	✓	5565.00
External										
SZ12A-XB	C	332 Mb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	3180.00
SZ12A-AB	C	2 × 332 Mb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	5963.00
SZ12B-XB	C	665 Mb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	4293.00
SZ12B-BB	C	2 × 665 Mb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	8189.00
SZ12C-XB	C	1 Gb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	5963.00
SZ12C-CB	C	2 × 1 Gb Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	11530.00
SZ12X-EB	C	TZK10 in Dual Expansion Box	–		–	✓	✓	✓	–	1829.00
SZ12X-LB	C	1.44 Mb 3½" RX23 Floppy Disk in Dual Expansion Box	✓		✓	✓	✓	✓	–	874.50
SZ12X-MB	C	1.2 Mb 5¼" RX33 Floppy Disk in Expansion Box	–		–	✓	✓	–	–	874.50
SZ12X-HB	C	95 Mb TZ30 Tape Drive in Dual Expansion Box	✓		✓	✓	✓	✓	–	1829.00
SZ12A-HB	C	RZ55 and TZ30 in Dual Expansion Box	✓		✓	✓	✓	✓	–	4611.00
SZ12A-LB	C	RZ55 and RX23 in Dual Expansion Box	✓		✓	✓	✓	✓	–	3657.00
SZ12B-HB	C	RZ56 and TZ30 in Dual Expansion Box	✓		✓	✓	✓	✓	–	5724.00
RX23-UK	C	1.44 Mb 3½" Floppy Upgrade for Dual Expansion Box	✓		✓	✓	✓	✓	–	477.00
RX33-UK	C	1.2 Mb 5¼" Floppy Upgrade for Dual Expansion Box	✓		–	✓	✓	–	–	477.00
RZ55-UK	C	332 Mb Disk Upgrade for Dual Expansion Box	✓		✓	✓	✓	✓	–	2783.00
RZ56-UK	C	665 Mb Disk Upgrade for Dual Expansion Box	✓		✓	✓	✓	✓	–	3896.00
RZ57-UK	C	1 Gb Disk Upgrade for Dual Expansion Box	✓		✓	✓	✓	✓	–	5565.00
RRD40-F3	D	600 Mb CDROM in Single Expansion Box	✓		✓	✓	✓	✓	✓	1272.00
Tapes										
Internal										
TLZ04-JF	I	1.2 Gb DAT	–		–	–	–	–	✓	3896.00
TZ30-EF	I	95 Mb Streamer	✓	(M30)	✓	–	–	✓	–	1431.00
TZ30-EH	D	95 Mb Streamer	✓	(M38)	–	–	–	–	–	1431.00
TZK10-FG	I	320 Mb QIC	–		–	–	–	✓	–	1431.00
External										
TK50Z-G3	C	95 Mb Streamer in Expansion Box	✓		✓	✓	✓	–	–	2783.00
TLZ04-FA	C	1.2 Gb DAT in Expansion Box	✓	(M76)	✓	–	✓	–	–	4373.00
TLZ04-GA	C	1.2 Gb DAT in Expansion Box	–		–	–	–	–	✓	4373.00
TLZ04-MA	I	1.2 Gb DAT in Expansion Box	✓	(M30)	–	–	–	–	–	4571.00
TLZ04-MB	I	1.2 Gb DAT in Expansion Box	✓	(M38)	–	–	–	–	–	4571.00
TZ30-UK	C	95 Mb Tape Drive for SZ12 Expansion Box	✓		✓	✓	✓	✓	–	1431.00
TZK10-UK	C	320 Mb QIC	–		–	✓	✓	✓	–	1431.00



DECstation 2100
DECstation 3100

Leadership price/ performance for the UNIX community

The DECstation 2100 and DECstation 3100 give you mainframe performance on your desktop.

The entry-level 10 MIPS DECstation 2100 system is part of the family of high-performance ULTRIX-32 workstations using Reduced Instruction Set Computer (RISC) technology.

Members of the family of ULTRIX based workstations, the DECstation 2100 and DECstation 3100 are backed by Digital's worldwide support and form part of the most productive networked computing environment available. No other vendor can give you all of that in a high-performance desktop workstation.

The DECstation 2100 and DECstation 3100 are based on open systems and standards, its operating system ULTRIX is compliant with POSIX, X/Open, OSF and the major industry-standards. ULTRIX is also compatible with AT and T's UNIX System V Interface Definition.

Leadership price/performance, make these workstations the ideal choice for many applications such as scientific modelling, data analysis, electronic publishing, statistical modelling, decision support and general purpose applications.

The spectacular performance comes from the RISC R2000 CPU and R2010 Floating Point Unit (FPU) developed by MIPS Computer Systems. Unlike some other high performance UNIX systems, this is characterised by well balanced integer and floating point performance. You'll never suffer degraded performance while the CPU waits for a slow floating point unit to complete its operations. The integral floating point processor is standard, not an expensive add-on option.

The DECstation 2100 and DECstation 3100 support a variety of peripherals using the industry-standard Small Computer System Interface (SCSI) bus. This support enables you to use a wide range of Digital or third party peripherals.

Features

R2000/R2010 MIPS Computer Systems CPU/FPU
Disk supported:
- up to 2 internal RZ23/RZ24 and 1 floppy
- up to 4 external
- Maximum 7 SCSI devices internal and external

High speed, 64 Kbyte data cache and 64 Kbyte instruction cache
Industry-standard SCSI interface
8 Mbytes to 24 Mbytes memory
Up to 4.4 Gbytes of local storage
Tape supported TK50Z (95 Mb)
RRD40 (600 Mb) CDROM supported
UWS/RISC
1 year warranty

DECstation 2100 Features

8.3 SPECmark performance

DECstation 3100 Features

11.3 SPECmark performance

Graphics Options

Monochrome – Single Plane

15″, 1024 x 864
19″, 1024 x 864

8 Plane – Colour/Greyscale

15″, 1024 x 864
19″, 1024 x 864

Dimensions and Weights:

See Workstation Selection Guide on pages 14/15.

Supporting Software Environment

A 1-2 user ULTRIX Worksystem Software (UWS) and DECnet/ULTRIX licence is included with every DECstation 2100/3100. You should order media and documentation in addition as required.

Guide to installation symbols

i	*Free installation by Digital*
C	*Designed to be installed by customers*
O	*Designed to be installed by customers Free assistance given if required*

ULTRIX Worksystem Software includes:

The ULTRIX-32 base operating system

TCP/IP and NFS networking software

ULTRIX/SQL Database

An optimising C compiler for RISC

X Window System Version 11 Release 3

OSF/Motif option

X User Interface (XUI)

Adobe Display PostScript

A wide variety of DECwindows based applications and development tools including the session manager, graphical mail interface, graphical debugger, and terminal emulator

DECnet/ULTRIX licence included

Multi-user upgrades, which allow users to log in via the network or through terminal servers, are also available.

Standalone Monochrome DECstation 3100 for C program development

Part No.	*Description*
PM200-CD	DECstation 3100, 16 Mb, Mono 19″
LK201-RE RZ24-FF	Keyboard 209 Mb Internal Disk Drive
TK50Z-G3	95 Mb Streaming Tape Drive in Expansion Box
2 E0-BN19A-2E	Power Cords
QA-VV1AA-H5	ULTRIX Media and Documentation TK50

Part No.		*Description*	*Price £*
Systems			
PM100-BD	O	DECstation 2100 8 Mb, 19″ Monochrome	3971.00
PM100-BU	O	DECstation 2100 8 Mb, 16″ Colour	5561.00
PM200-AD	O	DECstation 3100 8 Mb, 19″ Monochrome	5561.00
PM200-AU	O	DECstation 3100 8 Mb, 16″ Colour	6754.00
PM200-AJ	O	DECstation 3100 8 Mb, 19″ Colour	8741.00
PM200-CJ	O	DECstation 3100 16 Mb, 19″ Colour	10330.00
PM200-JD	O	DECstation 3100 8 Mb, RZ24, RZ23, 19″ Monocrome	7549.00
PM200-JU	O	DECstation 3100 8 Mb, RZ24, RZ23, 16″ Colour	8741.00
PM200-LJ	O	DECstation 3100 16 Mb, RZ24, RZ23, 19″ Colour	12320.00
Options			
LK201-RE	O	Keyboard	182.00
MS01-AA	i	4 Mb Expansion Memory	795.00
Software			
QA-VV1AA-H5*	C	ULTRIX Worksystem Software (UWS) Media and Documentation - TK50	1268.00
QA-YMCAA-H5	C	OSF/Motif Media - TK50	306.10
QL-YL5AA-AA	C	ULTRIX Server Licence	1274.00
QL-VV1A8-B5	C	ULTRIX 3-4 User Upgrade Licence	1003.00
QL-VV1A8-B8	C	ULTRIX 5-8 User Upgrade Licence	668.90
QL-VV1A8-B6	C	ULTRIX 9-16 User Upgrade Licence	1338.00
QA-YT9AA-H5	C	DECnet/ULTRIXMedia and Documentation – TK50	413.40

For storage options see page 19.

* Note: an ULTRIX Worksystem Software Kit must be ordered for the first DECstation on site. Any VAX system, VAXstation or DECstation running ULTRIX with sufficient resources, can serve a group of DECstations with their system software. Each server requires a server licence and installation of the appropriate server and layered product media kits.

DECstation 2100, DECstation 3100 Accessories and Supplies

Printers **Pages 73/93**

Tapes **Pages 120/121**

Software
(Refer to DECdirect Software Catalogue)

Cleaning Products **Pages 116/117**

Keyboxes for Media Storage **Pages 118/119**

Networking Components **Page 34**

DECstation 5000 Model 200

The fastest and most open workstations ever

Featuring the MIPS R3000 CPU and R3010 FPU chipset delivering a SPECmark of 18.5, the DECstation 5000 Model 200 sets new standards for performance and expandability.

The DECstation 5000 family starts with an 8 plane greyscale system, and goes all the way up to a 24 plane system with dual graphics engines and high performance geometry accelerator.

The DECstation 5000 Model 200 workstation gives you the performance and capabilities of larger RISC systems, in a compact desktop design. Industry-standards in graphics software, such as GKS and PHIGS, combined with powerful application development interfaces, such as DECwindows, Motif and the X Window System, provide you with all the tools you need for a complete application development environment.

The DECstation 5000 Model 200 workstation offers power, expansion and flexibility, with graphics capabilities designed to meet your applications needs. It is ideally suited to CAD/CAM, molecular modelling, visual simulation, laboratory data acquisition, medical imaging, seismic interpretation, financial and quantitative analysis, technical publishing, CASE, graphics arts and animation.

Features

60% faster than the DECstation 3100 (18.5 SPECmark)
Range of high performance graphics options
Up to 120 Mb memory
Open high performance TURBOchannel
FDDI and VME-bus connection soon
1 Gb disks available
Supports Lighted Programmable Function Keyboard (LPFK)
Supports Programmable Function Dials (PFD/'Dial Box')
Full binary compatibility with previous DECstations
Immediate availability
Large portfolio of applications
DECPhigs Run Time licence included with PXG/PXG Turbo Systems

DECstation 5000 Model 200CX /PX comparison

DECstation 5000 Model 200CX

The DECstation 5000 Model 200CX uses an 8 plane frame buffer which is similar to the colour version of the DECstation 3100. This means that there is no special hardware to accelerate graphics performance and that graphics operations are performed by the CPU. However, the fact that the CPU has an 18.5 SPECmark rating, and that the colour frame buffer interfaces to the very high performance TURBOchannel I/O interconnect, the achieved graphics performance of the CX option is very high. It will generally exceed not only the frame buffer performance of competitive systems but often their accelerated performance as well!

DECstation 5000 Model 200PX

The DECstation 5000 Model 200PX uses a custom graphics co-processor called PixelStamp which accelerates 2D graphics operations such as vectors and polygons by 200-300% compared to the CX option.

Configurations of the DECstation 5000 Model 200 are available, either diskless or with a 332 Mb disk housed in a dual expansion box. All systems can be expanded to 120 Mb memory and, upgraded with up to seven external SCSI devices. Each external expansion box requires a power cord. The following upgrades and options are available from your local sales office; Thick Wire Ethernet Option, Additional SCSI Controller, PX 2D Accelerator Upgrade, PXG 8 Plane Upgrade, PXG 24 Plane Upgrade, 8-24 Plane Upgrade and 24 bit Z Buffer Upgrade.

For a complete DECstation 5000 system a keyboard and power cord are required. For the DECsystem 5000, a console terminal and power cord are required.

High performance TURBOchannel I/O bus

Introduced with this system is a new very high performance I/O bus, the TURBOchannel, this drives the graphics hardware and other options from Digital. The TURBOchannel is an open bus, and can be freely licenced by option vendors needing to access its speed and performance. Already, independent vendors plan TURBOchannel options for applications from image analysis processing to vector processing.

Each system comes with a SCSI controller for disk, tape, and FDDI connection, and in future new Digital TURBOchannel options will give high performance access to VME.

DECstation 5000s are fully binary compatible with all Digital's RISC DECstations and DECsystems; this means they can use any of the 1000 plus applications currently available for RISC.

Guide to DECstation 5000 Model 200 Configurations

This guide gives you all the relevant comparative data so you can select the DECstation 5000 that is most suited to your requirements.

	CX	PX	PXG	PXG Turbo	DECsystem 5000 Model 200
TURBOchannel Slots Used/Free	1/2	1/2	2/1	3/0	0/3
Rendering Processor	N/A	PixelStamp	PixelStamp	2 x PixelStamp	N/A
Graphics Accelerator	N/A	N/A	i860 @ 33 MHz	i860 @ 40 MHz	N/A
Planes	8	8	8/24	24	N/A
Resolution	1024 x 864	1280 x 1024	1280 x 1024	1280 x 1024	N/A
Refresh	60 Hz	66 Hz	66 Hz	66 Hz	N/A
Monitors	VR262 VR297 VR299	VRT19	VRT19	VRT19	N/A
Ideal Uses	**Cost** Sensitive Applications	High Perf 2D, Low Cost Hi Res	3D Modelling Imaging	High Perf 3D, Imaging	File Server, Compute Server
Applications	2D CAD, CASE, Tech Pubs, Financial	ECAD, MCAD	Design, Interpretation, Modeling, Imaging	Visualization, Imaging, Animation	General Purpose, Multi-user

DECstation 5000 Model 200 PXG/PXG Turbo comparison

DECstation 5000 Model 200PXG

The DECstation 5000 Model 200PXG utilises the same PixelStamp graphics processor as the PX, plus an Intel i860 microprocessor which operates at 33 MHz. The i860 acts as a geometry accelerator and performs all of the 3D transformations. The PXG is available as either an 8 plane configuration with an 8 plane double buffer or as a 24 plane configuration with a 24 plane double buffer. A customer can have an 8 plane PXG upgraded to 24 planes on-site by Digital Customer Services.

An option 24-bit Z-buffer can be added to either configuration for use by applications requiring fast hidden-line and hidden-surface removal.

DECstation 5000 Model 200PXG Turbo

The DECstation 5000 Model 200PXG Turbo utilises two PixelStamp graphics engines that operate in parallel, plus an Intel i860 microprocessor which operates at 40 MHz. The combination of the additional PixelStamp processor, plus the faster i860 geometry accelerator, helps to boost 3D performance by as much as 100% over the PXG option for certain graphics operations. The PXG Turbo option comes standard with 24 planes plus a 24 plane double buffer, 24-bit Z-buffer, and 24 planes of additional offscreen memory which can be used by the X server for pixmaps. The PXG Turbo option is the only option which requires all three DECstation 5000 Model 200 TURBOchannel slots.

Standalone system with accelerated 2D graphics

Part No.	Description
PM362-PL	16 Mb DECstation 5000 Model 200PX includes 332 Mb Disk
3 E0-BN19A-2E	Power Cables
LK201-RE	Keyboard
RRD40-F3	CDROM Drive
QA-VV1AA-H8	Ultrix Media and Documentation - CDROM

Dimensions and Weights:

See Workstation Selection Guide on pages 14/15.

The DECstation 5000 family

DECstation 5000 Model 200CX	8 plane greyscale or colour frame buffer
DECstation 5000 Model 200PX	8 plane colour 2D accelerator
DECstation 5000 Model 200PXG	8 or 24 plane 3D accelerator
DECstation 5000 Model 200PXG Turbo	24 plane high performance 3D accelerator
DECsystem 5000 Model 200	Server system

DECsystem 5000 Model 200

Also available is a special 4 user/ server configuration of the DECstation 5000 called the DECsystem 5000 Model 200. The DECsystem is designed as high performance file and compute server, it has the same 18.5 SPECmark rating as the DECstation and can handle up to 28 Gb of storage.

Part No.		Description	Price £
DECstation 5000 Model 200 Systems			
PM361-BE	O	CX 19" Greyscale 8 Mb Diskless	11920.00
PM361-ME	O	CX 19" Greyscale 8 Mb 332 Mb Disk	14700.00
PM361-BH	O	CX 16" Colour 8 Mb Diskless	13120.00
PM361-MH	O	CX 16" Colour 332 Mb Disk	15900.00
PM361-BL	O	CX 19" Colour 8 Mb Diskless	15110.00
PM361-ML	O	CX 19" Colour 8 Mb 332 Mb Disk	17890.00
PM362-BL	O	PX 2D Accelerator 19" Colour 8 Mb Diskless	17090.00
PM362-ML	O	PX 2D Accelerator 19" Colour 8 Mb 332 Mb Disk	19880.00
PM362-DL	O	PX 2D Accelerator 19" Colour 16 Mb Diskless	20590.00
PM362-PL	O	PX 2D Accelerator 19" Colour 16 Mb 332 Mb Disk	23370.00
PM363-DL	O	PXG 8 Plane 3D 19" Colour 16 Mb Diskless	22180.00
PM363-PL	O	PXG 8 Plane 3D 19" Colour 332 Mb Disk	24960.00
PM364-DL	O	PXG 24 Plane 3D 19" Colour 16 Mb Diskless	27750.00
PM364-PL	O	PXG 24 Plane 3D 19" Colour 332 Mb Disk	30530.00
PM365-EL	O	PXG Turbo 24 Plane High Perf 3D 19" Colour 24 Mb Diskless	42770.00
PM365-RL	O	PXG Turbo 24 Plane High Perf 3D 19" Colour 332 Mb Disk	45550.00
PM369-PZ	O	DECsystem 5000 Model 200 16 Mb 332 Mb Disk 4 User Server	18200.00
Options			
VSX10-A3	O	LPFK and PFD Package	2275.00
VSX20-A3	O	LPFK Package	1365.00
VSX30-A3	O	PFD Package	1593.00
LK201-RE	O	Keyboard	182.00
MS02-AA	O	8 Mb Memory Module	3498.00
E0-BN19A-2E		Power Cable	6.90
Software			
QA-VV1AA-H5	C	ULTRIX Worksystem S/W Media and Documentation – TK50	1268.00
QA-VV1AA-H8	C	ULTRIX Worksystem S/W Media and Documentation – CDROM	1268.00
QL-VV1A8-B5	C	3-4 User Upgrade Licence	1003.00
QL-VV1A8-B8	C	5-8 User Upgrade Licence	668.90
QL-VV1A8-B6	C	9-16 User Upgrade Licence	1338.00
QL-VV1A8-BS	C	17-32 User Upgrade Licence	2674.00
QL-VV1A8-BT	C	33-64 User Upgrade Licence	2499.00
QL-VV1A8-B9	C	65-Unlimited User Upgrade Licence	2499.00

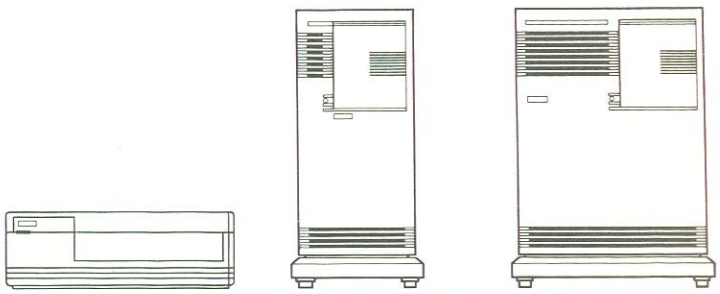
For storage options see page 19.

DECstation 5000 Accessories and Supplies

Printers	**Pages 73/93**
Tapes	**Pages 120/121**
Software *(Refer to DECdirect Software Catalogue)*	
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**
Networking Components	**Page 34**

MicroSystem Selection Guide

A useful guide to help you choose the system that's right for you

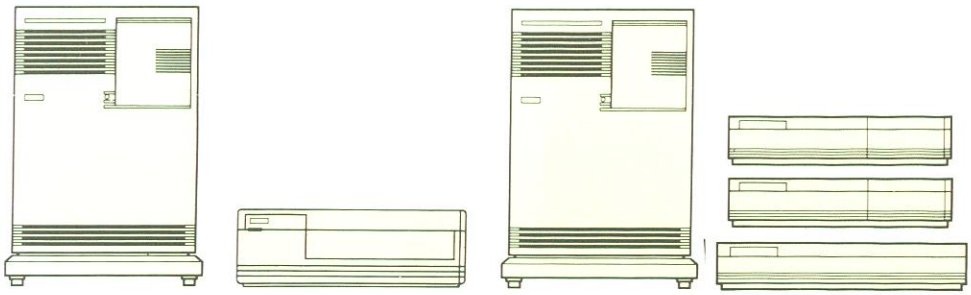


	MicroVAX 3100 VAXserver 3100	MicroVAX 3300 VAXserver 3300	MicroVAX 3400 VAXserver 3400
SPECmark Rating	3.2	2.2	2.2
Central Processing Unit (CPU)	78034 CMOS VAX		
Floating Point Unit (FPU)	78134 standard		
Memory	4 to 32 Mb	4 to 52 Mb	4 to 52 Mb
Maximum Local Disk Storage*	4.4 Gb	4.6 Gb	4.8 Gb
Dual – Host Support	No	Yes	Yes
Local Tape Storage*	95 Mb streamer or 1.2 Gb DAT	95 Mb, 296 Mb streamer 1.2 Gb DAT, 1600/6250 bpi ½"	
Operating System	VMS, or VAXELN (real time executive)		
Networking s/w	VAXcluster, DECnet/OSI, PATHWORKS, NFS, TCP/IP		
Ethernet Standard	ThinWire and Thick standard		
Bus	SCSI, IEEE488 optional	Q-bus	
Local Communications (Max)†	12 lines + 2 sync.	48 lines	80 lines

Certain configurations of these systems are available from this catalogue. For more information please

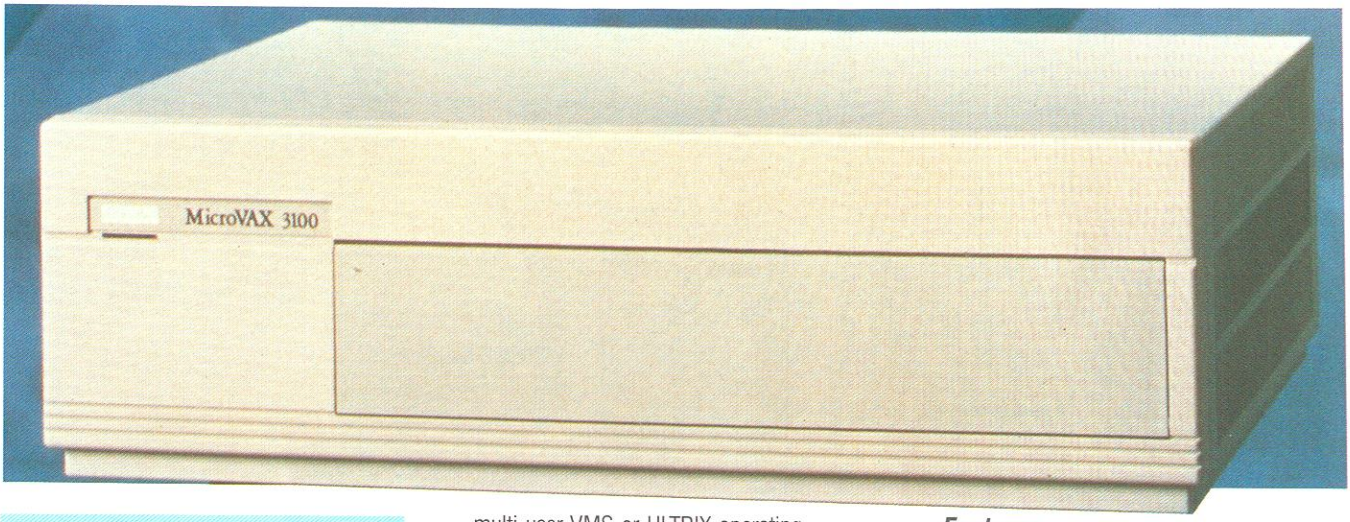
* Incorporation into a VAXcluster or NFS environment gives any MicroVAX, VAXserver or DECsystem access to virtually unlimited storage.

† Connection of terminals and printers through DECserver terminal servers, provides additional functionality and virtually unlimited expansion potential.



VAX 4000 Model 300	DECsystem 5100	DECsystem 5500	DECsystem 5000 Model 200	
7.9	14.9	21.5	18.5	SPECmark Rating (VAX-11/780 = 1)
DC520	MIPS R3000 CMOS RISC			Central Processing Unit (CPU)
DC523	MIPS R3010 standard			Floating Point Unit (FPU)
32 to 128 Mb	8 to 128 Mb	32 to 128 Mb	16 to 120 Mb	Memory
40 Gb	4.6 Gb	28 Gb	17 Gb	Maximum Local Disk Storage*
Yes	No			Dual - Host Support
296 Mb streamer, 1.2 Gb DAT, 1600//6250 bpi ½"	95 Mb streamer, 1.2 Gb DAT, 320 Mb Q1C	296 Mb streamer, 1.2 Gb DAT, 1600/6250 bpi ½"	95 mb Streamer, 1.2 Gb DAT, 1600 bpi ½"	Local Tape Storage*
VMS or VAXELN (real time executive)	UNIX			Operating System
VAXcluster, DECnet/OSI, PATHWORKS, NFS, TCP/IP	DECnet/OSI, NFS, TCP/IP			Networking s/w
High Performance SGEC	ThinWire and Thick standard		ThinWire standard	Ethernet standard
Q-bus, DSSI, SCSI	SCSI	Q-bus, SCSI, DSSI, SDI	TURBOchannel, SCSI, VME, FDDI	Bus
272 lines	12 lines	128 lines	Communication over Network	Local Communications (Max)†

Performance is highly dependent on configuration, application and operating environment. Individual workloads should be carefully evaluated before making performance estimates for specific applications. In this chart no warranty of system performance is expressed or implied.



MicroVAX 3100

New entry-level MicroVAX gives 40% more performance

The new entry-level VAX computers, the MicroVAX 3100 Models 10e and 20e; are faster, have 40% more CPU performance and yet cost less than previous models.

These new lower-priced multi-user systems also offer three times more storage expansion and on the Model 20e twice the number of synchronous lines.

The MicroVAX 3100 is the perfect choice for general purpose computing as a distributed system or as a complete multi-user system for small businesses.

As a distributed system in a corporate network, the MicroVAX 3100 enhances data collection, transaction processing, and communications with remote locations. As a multi-user system supporting small business needs, the MicroVAX 3100 acts as a flexible partner for handling everyday activities like word processing, order entry, accounting, and stock control.

The MicroVAX 3100 system can sit on a shelf or desktop and suits any business environment. It is available in two compact enclosures; the Model 10e enclosure is slightly smaller and has space for up to three RZ24 disks giving a total of 627 Mb. The larger Model 20e enclosure has space for up to five RZ24 disks giving a total capacity of 1.05 Gb.

Each system includes an Ethernet adapter and external SCSI port, as well as multi-user VMS or ULTRIX operating system and DECnet communications software licenses.

Setting the standard for distributed processing

The MicroVAX 3100 system sets the standard for distributed computing by offering you multi-user VAX computing at every remote site, at the lowest price ever.

The MicroVAX 3100 system cost-effectively runs ALL-IN-1, electronic mail, and other office applications, including PCLAN management with PATHWORKS, and simultaneously provides a communications link to area or head office. MicroVAX 3100 systems in manufacturing plants and warehouses can handle materials management, order processing, and stock control locally, and then update corporate databases with the latest figures.

Each system comes with DECnet communications software so you can build both Local Area Networks (LANs) and Wide Area Networks (WANs). In the latter the MicroVAX 3100 can communicate with DECnet, SNA, or X.25. A standard RS232 asynchronous serial line allows an inexpensive solution for applications that require low-volume data transmissions. The DSH32 controller, standard with the large pre-configured system, provides higher-speed synchronous connectivity for distributed applications.

File and application server versions of the MicroVAX 3100 are available, these are VAXservers and the PATHWORKS Server 3100 which is specifically designed for Integrating PCs into a Local Area Network. See the Networks and Communications section of this catalogue for more information on the PATHWORKS Server 3100.

Features

- Compact size, suitable for shelf or desktop
- Factory loaded VMS software for fast installation
- Two synchronous lines available at up to 19.2 Kbaud for full modem control
- SCSI (Small Computer System Interface) allows connection to additional external storage
- System memory can be expanded from 4 to 32 Mbytes
- Supports DAT and CDROM

Dimensions, Weights and Power:

Model 10e

Height:	4.1″	(103 mm)
Width:	18.3″	(464 mm)
Depth:	15.5″	(394.2 mm)
Weight:	25 lbs	(11.4 kg)
Line Voltage:		240V a.c.
Maximum Running Current:		2.8A

Model 20e

Height:	5.9″	(149.9 mm)
Width:	18.3″	(464 mm)
Depth:	15.8″	(400 mm)
Weight:	45 lbs	(20.5 kg)
Line Voltage:		240V a.c.
Maximum Running Current:		4.5A

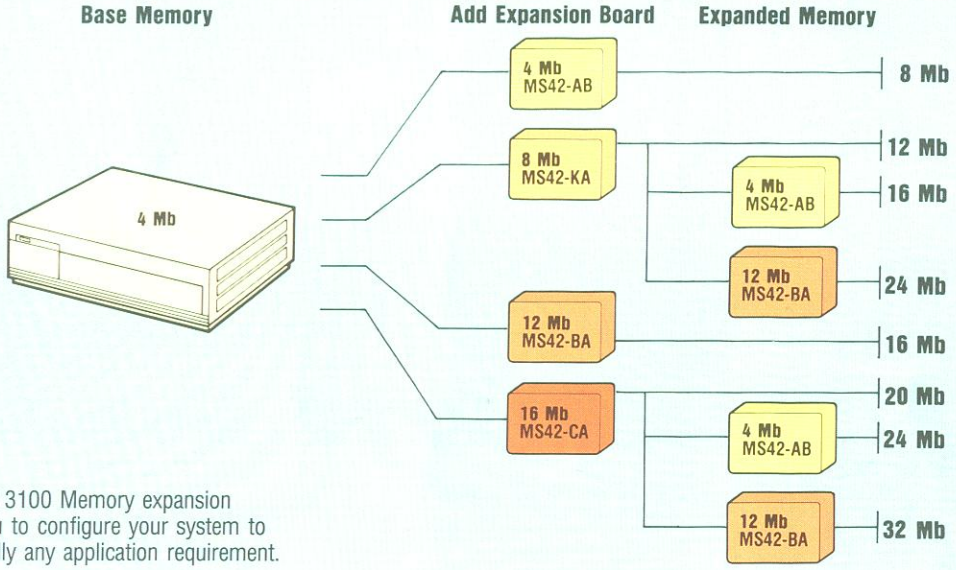
Choose the MicroVAX 3100 to suit your needs

The MicroVAX 3100 is available in both System Building Block (SBB) configurations and specially priced pre-configured systems.

The SBBs are designed to fulfil your precise requirements by allowing maximum flexibility of configurations.

Use the chart opposite to configure your SBB MicroVAX 3100.

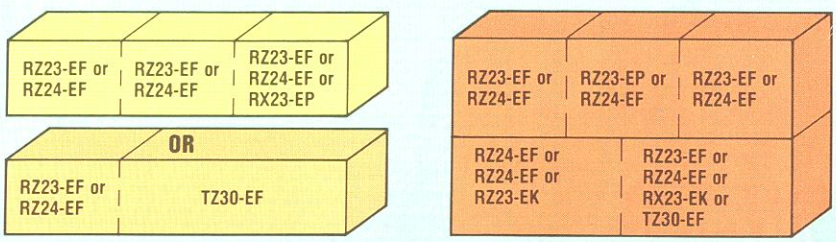
MicroVAX 3100 Models 10e and 20e Additional Memory Modules



MicroVAX 3100 Memory expansion allows you to configure your system to suit virtually any application requirement.

MicroVAX Model 10e and 20e Additional Internal Storage

The MicroVAX 3100 System Building Blocks can be configured with the following storage options internally. In addition to any internal storage up to 4 external devices may be connected. See page 19 for more information on the external expansion potential of the MicroVAX 3100.



MicroVAX 3100 Accessories and Supplies

Terminals	**Pages 64/72**
Printers	**Pages 73/93**
Tapes	**Pages 120/121**
Software *(Refer to the DECdirect Software Catalogue)*	
Cables	**Page 63**
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**
Networking Components	**Page 34**

Guide to installation symbols

- i — *Free installation by Digital*
- C — *Designed to be installed by customers*
- O — *Designed to be installed by customers Free assistance given if required*

Part No.		Description	Price £
Systems			
DV-31DT1-A9	O	MicroVAX M10e 4 Mb RZ23 RX23 5-User	6040.00
DV-31ET4-A9	O	MicroVAX M20e 8 Mb RZ24 TZ30 DSH32 5-User	10720.00
DV-31DTA-A9	O	MicroVAX 3100 M10e SBB 4 Mb, VMS 5-User	4832.00
DV-31DSA-A9	O	VAXserver 3100 M10e SBB 4 Mb, VMS Server	3473.00
DV-31ETA-A9	O	MicroVAX 3100 M20e SBB 4 Mb, VMS 5-User	5965.00
DV-31ESA-A9	O	VAXserver 3100 M20e SBB 4 Mb, VMS Server	4606.00
Options			
FC310-AE	O	Country Kit (H/W Documentation and Cables)	60.40
MS42-AB	i	4 Mb Expansion Memory*	795.00
MS42-KA	i	8 Mb Expansion Memory with Adapter*	1590.00
MS42-BA	i	12 Mb Expansion Memory*	2385.00
MS42-CA	i	16 Mb Expansion Memory with Adapter*	3180.00
DSH32-BA	i	8 Async DEC423 plus 1 RS232 Sync	1510.00
Software			
QA-09SAA-H5	C	VMS Media and Base Documentation – TK50	1252.00
QA-VWJ8B-H8	C	Consolidated Software Distribution CDROM & Base Documentation	552.50
QL-001AP-BW	C	VMS Upgrade Licence 6 – 10 Users	2503.00
QL-001AP-BU	C	VMS Upgrade Licence 11 – 15 Users	2503.00
QL-001AP-BV	C	VMS Upgrade Licence 16 – Unlimited Users	2503.00

For storage options see page 19.

* For memory configurations follow the guidelines in the VAXstation 3100 section

MicroVAX 3300
VAXserver 3300
MicroVAX 3400
VAXserver 3400

The expandable mid-range systems

New performance, packaging and pricing sets the standard for these four entry level MicroVAX systems.

Available in either timesharing or server versions, the MicroVAX 3300 and MicroVAX 3400 systems, use the RF30 or new RF31 Integrated Storage Elements (ISE) and advanced CMOS CPU chip technology. The compact MicroVAX 3300 and VAXserver 3300 models offer two slots for disk storage. The more expandable MicroVAX 3400 and VAXserver 3400 models provide three disk storage slots, both systems can, in addition, house a tape drive internally.

The new systems share the latest integrated CPU module which uses advanced CMOS VLSI technology to combine intelligent disk I/O, 4 Mb of memory and the Ethernet adapter. Memory and disk transfers use a high speed 32 bit internal bus, as a result the I/O subsystem provides very high bandwidth and performance which also leaves the Q-bus free from system I/O.

Both the MicroVAX 3300 and VAXserver 3300 use the compact and cost effective BA215 pedestal enclosure which has six Q-bus slots, while the MicroVAX 3400 and VAXserver 3400 use the 12 slot BA213. Both these enclosures offer easy front access to modules and are of rugged construction.

New integrated, Intelligent Storage Subsystem sets industry-standard

The RF30 and RF31 Integrated Storage Elements are members of a new generation of storage devices. Combined with the Digital Storage Systems Interconnect (DSSI) of the MicroVAX 3300 and MicroVAX 3400, the RF30 and RF31 offer industry-leading multiple disk performance. The intelligence and throughput capabilities of the ISE, make the MicroVAX 3300 and MicroVAX 3400 systems ideally suited for distributed computing applications, particularly where high performance and throughput are required.

An important feature of both the MicroVAX 3300 and the MicroVAX 3400, is the dual hosting capability – an implementation of dynamic dual-porting. A dual host configuration consists of two VMS systems whose ISEs are linked by the Digital Storage Systems Interconnect (DSSI) cable – actually an external bus. Through that link, each system can access all of the ISEs on the bus.

MicroVAX 3300 and VAXserver 3300 systems can accept a maximum of two ISEs for internal storage. MicroVAX 3400 and VAXserver 3400 systems can accept a maximum of three ISEs for internal storage. Both systems can, in addition, be configured with an external expansion enclosure which can accept a maximum of three ISEs.

A MicroVAX 3300 and MicroVAX 3400 dual host configuration is optimised for availability when used with VAXcluster software. The dual host configuration can be used as a VAXcluster timesharing system or as a boot node in a VAXcluster. dual host system configured in a VAXcluster allows two CPUs to share a single system disk. Direct paths to the disk from both systems provide efficient access to data. If one of the systems goes down, users or satellite nodes booted through the absent CPU have access to the system disk, and other disks via the second system and the DSSI bus.

Total compatibility – existing networks or system

With total VAX compatibility using VMS, these MicroVAX and VAXserver systems can be integrated into existing networks and VAXclusters or be used as high performance standalone systems. The VAXserver systems make cost effective PATHWORKS servers, VAXcluster boot servers, satellites and dedicated device controllers or compute servers. The MicroVAX systems are general purpose multi-user time sharing systems.

Features

- CMOS CPU module (over 2 × MicroVAX II performance)
- Up to 52 Mb ECC memory
- 6 Q-bus slots MicroVAX 3300, VAXserver 3300
- 12 Q-bus slots MicroVAX 3400, VAXserver 3400
- Integrated CPU, memory, disk controller and Ethernet adapter
- High performance RF30 or RF31 Integrated Storage Element
- ThinWire/standard Ethernet connection
- 1 year warranty

MicroVAX 3300 and MicroVAX 3400

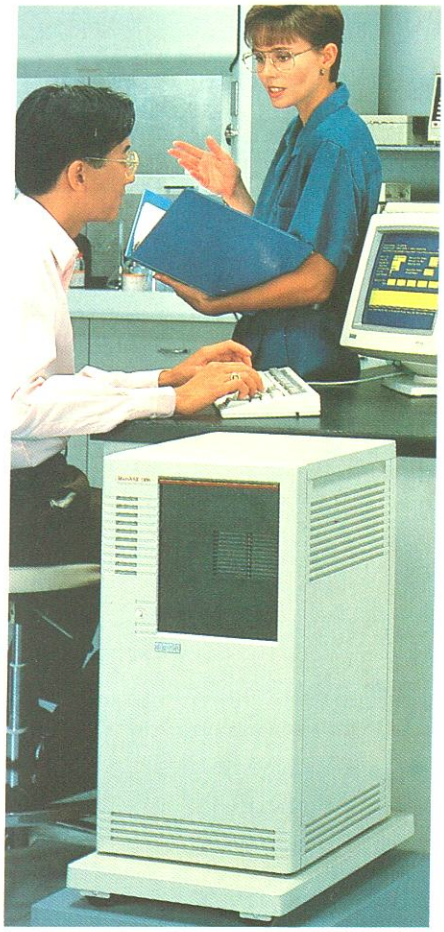
- 5 user VMS licence or 10 user VMS licence
- DECnet E/N licence
- PATHWORKS licence

VAXserver 3300 and VAXserver 3400

- VMS File and Application Server licence
- VMS/ULTRIX Connection licence
- DECnet F/F licence
- PATHWORKS licence

Dimensions, Weights and Power:

	BA215 Enclosure		BA213 Enclosure	
Height:	27″	(690 mm)	27″	(690 mm)
Width:	13.8″	(350 mm)	21″	(530 mm)
Depth:	17.7″	(450 mm)	17.7″	(450 mm)
Weight:	85 lbs	(38.5 kg)	140 lbs	(64.0 kg)
Line Voltage:	240V a.c.		240V a.c.	
Consumption:	340W		670W	
Maximum Running Current:	2.4A		4.7A	



Specification Comparison

MicroVAX 3300	VAXserver 3300	MicroVAX 3400	VAXserver 3400
DV-330T4-A3	DV-330S4-A3	DV-340T4-A3	DV-340S4-A3
CPU Module	CPU Module	CPU Module	CPU Module
4Mb Memory	4Mb Memory	4 Mb Memory	4 Mb Memory
Ethernet Controller	Ethernet Controller	Ethernet Controller	Ethernet Controller
ISE Adapter	ISE Adapter	ISE Adapter	ISE Adapter
BA215 Pedestal	BA215 Pedestal	BA213 Pedestal	BA213 Pedestal
5 User VMS Licence	VMS File & Application Server Licence	10 User VMS Licence	VMS File & Application Server Licence
DECnet E/N Licence	DECnet F/F Licence VMS/ULTRIX Connection Licence	DECnet E/N Licence	DECnet F/F Licence VMS/ULTRIX Connection Licence
PATHWORKS Licence	PATHWORKS Licence	PATHWORKS Licence	PATHWORKS Licence
1 Year Warranty	1 Year Warranty	1 Year Warranty	1 Year Warranty

Example 10 User System for C Program Development

Part No.	Description	Part No.	Description
1 DV-340T4-A3	MicroVAX 3400 System	10 DL-VT420-BE	VT420 Terminals
1 MS650-BF	16 Mb Memory Board	10 BC16E-xx	Terminal Cables
1 BN20E-2E	Power Cord	1 QL-015AS-AA	VAX C Licence
1 TQK70-SF	Tape Controller	1 QA-015AA-H5	VAX C Media and Documentation
1 TK70E-SF	Tape Drive	1 QL-965AS-AA	VAXset Licence
2 RF31E-SF	381 Mb Disk Drive	1 QA-965AA-H5	VAXset Media and Documentation
1 CXA16-AF	16 Asynchronous Lines	1 QA-001AC-H5	VMS Media and Extended Documentation

Part No.		*Description*	*Price £*
Systems			
DV-330T4-A3	i	MicroVAX 3300 SBB, 4 Mb, 5-User	11130.00
DV-330S4-A3	i	VAXserver 3300 SBB, 4 Mb, Server	9643.00
DV-340T4-A3	i	MicroVAX 3400 SBB, 4 Mb, 10-User	27230.00
DV-340S4-A3	i	VAXserver 3400 SBB, 4 Mb Server	15760.00
Options			
MS650-AF	i	8 Mb Expansion Memory	4770.00
MS650-BF	i	16 Mb Expansion Memory	9540.00
CXA16-AF	i	16 Lines RS423 (DEC MMJ)	2057.00
CXY08-AF	i	8 Lines RS232 with Modem Control	1423.00
RF30E-SF	i	150 Mb ISE	2584.00
RF30B-DB	i	RF30E 150 Mb ISE in Expansion Pedestal	3299.00
RF30C-DB	i	2 x RF30 150 Mb ISE in Expansion Pedestal	5883.00
RF31E-SF	i	381 Mb ISE	4770.00
RF31B-DB	i	RF31 381 Mb ISE in Expansion Pedestal	5486.00
TK70E-SF	i	296 Mb Cartridge Tape Drive	3657.00
TQK70-SF	i	Controller for TK70E-SF	1113.00
E0-BN19A-2E	i	Power Cord for TLZ04, RRD40	6.90
E0-BN20E-2E	i	Power Cord for System Pedestal	8.30
BN19B-2E		Power Cord for Expansion Pedestal	7.60
BC21M-09		DSSI Cable	103.50
KFQSA-SG	i	TLZ04 Adapter	2703.00
TLZ04-GA	C	1.2 Gb DAT Tape in Desktop Enclosure	4373.00
RRD40-SG	i	CDROM includes Controller	1988.00
Software			
QL-001AS-BW	C	VMS 6 – 10 User Upgrade Licence	3754.00
QL-001AS-B2	C	VMS 11 – 20 User Upgrade Licence	7508.00
QL-001AS-BX	C	VMS 21 – 30 User Upgrade Licence	7508.00
QL-001AS-BY	C	VMS 31 – Unlimited User Upgrade Licence	7508.00
QA-09SAA-H5	C	VMS Media and Base Documentation - TK50	1252.00
QA-001AA-H5	C	VMS Media and Extended Documentation - TK50	3176.00
QA-VWJ8A-A8	C	VMS & Layered Product Media - CDROM	791.00
QA-VWJ8B-H8	C	VMS & Layered Product Media + Base Doc - CDROM	552.50
QA-VWJ8A-H8	C	VMS & Layered Product Media + Extended Doc - CD-ROM	2063.00
QA-VYR8A-G8	C	VMS & Layered Product Documentation - CDROM	632.00

MicroVAX 3300/3400 and VAXserver 3300/3400 Accessories and Supplies

Terminals Pages 64/72
Printers Pages 73/93
Tapes Pages 120/121
Software
(Refer to DECdirect Software Catalogue)
Cables Page 63
Cleaning Products Pages 116/117
Keyboxes for Media Storage Pages 118/119
Networking Components Page 34

Guide to installation symbols

- i — *Free installation by Digital*
- C — *Designed to be installed by customers*
- D — *Designed to be installed by customers Free assistance given if required*

VAX 4000 Model 300

Supports more users and works faster

The VAX 4000 Model 300 is the new top-of-the-range MicroVAX that's so powerful it isn't called a MicroVAX!

This new computer system combines a powerful 7.9 SPECmark, CMOS-based CPU with very high performance Ethernet and disk interfaces. Each of the new, higher performance, DSSI Integrated Storage Elements and Ethernet microprocessor-adapters has the power of 1 10-MIP RISC processor with Direct Memory Access (DMA) which frees the CPU for application-specific tasks.

The benefit is a system that is an incredible 10 times more powerful than the MicroVAX II and offers unbeatable price/performance.

The VAX 4000 Model 300 has the capability to support up to 124 active, simultaneous ALL-IN-1 users – that's 248 subscribers – processing 22 transactions per second in a transaction processing environment, or supporting 60 high performance diskless workstations requiring I/O services.

Unprecedented I/O processing power

The VAX 4000 Model 300 uses two embedded DSSI adapters included on the system module.

Each of these adapters can support up to 800 I/Os per second, a total of 1600 I/Os per second which represents unprecedented I/O processing power in an open work space environment system.

The combination of the two embedded DSSI adapters and VAX running VMS shadowing phase II software; or a dual host VAX 4000 Model 300 adds up to a system with a very high data availability, plus redundancy capabilities previously only available with CI-based clusters. Volume shadowing also provides the highest level of data protection.

Big system power you can use anywhere

The new VAX 4000 Model 300 gives a big system power advantage but is compact in size and doesn't need to be installed in a computer room environment so it is perfect for use in open workspace applications. With the environment in mind, the VAX 4000 Model 300 has been designed with a greater cooling capacity to ensure it's very quiet in operation. The system's high I/O throughput, storage and processing power make it an excellent choice as a database server in finance, insurance and manufacturing for example, or as a mail server in office environments.

In fact, the VAX 4000 Model 300 is the perfect system where high I/O, high compatibility and expandability and excellent data integrity are important criteria. Not of course forgetting the outstanding price/performance ratio offered by the new VAX 4000 Model 300.

Improved storage performance

The Integrated Storage Elements (ISEs) available for the VAX 4000 Model 300 system are 5¼" storage devices that feature dedicated intelligent controllers embedded in each device. These devices are housed in special mounting brackets for simplified installation in the new BA400 enclosures. Both half-height and full-height devices are available. The RF-series ISEs used with the VAX 4000 Model 300 system provide performance improvements over previous DSSI devices. The 381 Megabyte RF31 is designed to provide optimum performance on VAX 4000 Model 300 at 30% to 40% higher performance than RF71 ISE disks.

Two Q-bus systems in a dual-host configuration use RF-series storage devices, the DSSI bus, Ethernet, VMS, DECnet, and VAXcluster software to create dual paths to the ISEs. If one system in the configuration fails or is unavailable, users are still able to access data on all ISEs through the second system, so providing the highest level of security. Any VAX 4000 Model 300 or Q-bus VMS MicroVAX system can be included in a dual-host configuration.

Features

- Unbeatable price/performance ratio
- Big system power; small footprint
- Doesn't require computer room environment
- Upgradeable for future growth
- VAX compatibility
- Satisfies high I/O requirement
- DSSI technology delivers mainframe I/O performance
- 1.2 Gb of fast, unattended back-up
- 7.9 SPECmarks of CPU power
- Increased availability with dual-host and shadowing software

System Features

2 DSSI adapters
On-board Ethernet controller
32 Mb memory
3 free memory slots
7 free Q-bus slots
Console case
One year warranty

Timesharing system – DV-43JT1-A9

7.9 SPECmark multi-user CPU
VMS 40 user licence
DECnet end-node licence, includes PATHWORKS for VMS licence

Server System – DV-43JS1-A9

7.9 SPECmark Server CPU
VMS File and Application Server licence
VAXcluster software licence
DECnet full-function licence includes PATHWORKS for VMS licence
VMS/ULTRIX Connection licence

Configuration

The VAX 4000 Model 300 is available either as a multi-user timesharing system, or a file and application server. Add up to four RF31 ISEs or three ISEs and one TK70 tape drive and controller. Additional storage devices are housed in storage expansion enclosures. Each system requires a power cable and a console terminal. Add up to three additional memory modules for a maximum of 128 Mb.

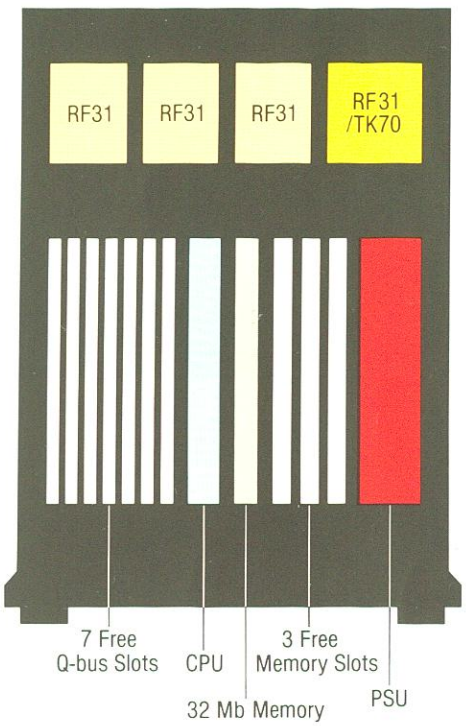
Dimensions, Weight and Power:

Height:	27.2"	(690 mm)
Width:	20.9"	(530 mm)
Depth:	17.7"	(450 mm)
Weight:	150 lbs	(68 kg)
Line Voltage:		190 – 256V a.c.
Consumption:		860W
Maximum Running Current:		5.85A

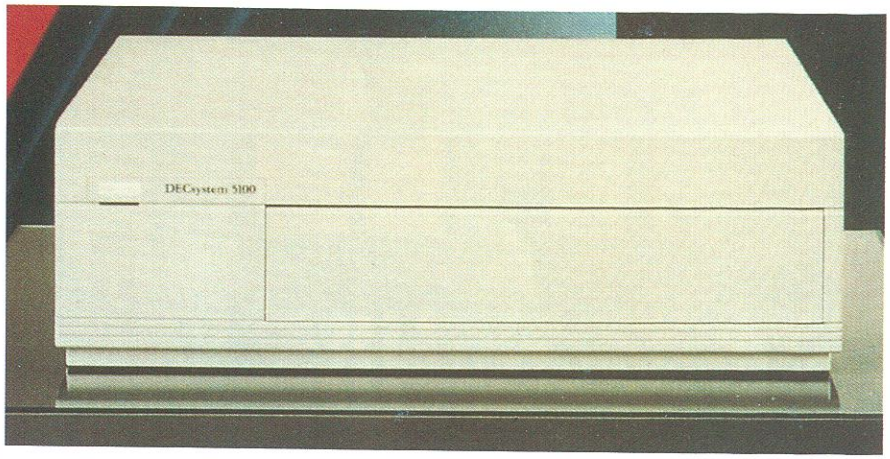
VAX 4000 Model 300 Accessories and Supplies

Terminals	**Pages 64/72**
Printers	**Pages 73/93**
Tapes	**Pages 120/121**
Cleaning Products	**Pages 116/117**
Keyboxes for Media Storage	**Pages 118/119**
Networking Components	**Page 34**

VAX 4000 Model 300



Part No.		*Description*	*Price £*
Systems			
DV-43JT1-A9	i	VAX 4000 Model 300 32 Mb 40-User	64350.00
DV-43JT2-A9	i	VAX 4000 Model 300 Dual Host System 32 Mb x 2 Unlimited-User VMS	52400.00
DV-43JS1-A9	i	VAXserver 4000 Model 300 32 Mb File and Application Server	42440.00
DV-43JS2-A9	i	VAXserver 4000 Model 300 Dual Host Server 32 Mb File and Application	84460.00
Options			
MS670-BA	i	32 Mb Memory Module	19080.00
RF31E-AF	i	381 Mb Integrated Storage Element	4770.00
RF72E-AF	i	1 Gb Integrated Storage Element	9540.00
TK70E-AF	i	296 Mb Tape Drive	3657.00
TQK70-SF	i	Controller required for TK70E-AF	1113.00
BN22E-2E	i	Power Cable, 1 required for system and each Expansion Pedestal	6.90
KZQSA-SF	i	SCSI Controller	1590.00
B400X-B9	i	Storage Expansion Pedestal, 7 Cavity	7225.00
R400X-B9	i	Q-bus Storage Expansion Pedestal, 10 Slot/4 Cavity	1785.00
TLZ04-GA	i	DAT Tape Desktop Enclosure	4373.00
TLZ04-JF	i	DAT Tape for Expansion Pedestal	3896.00
RRD40-F3	D	CDROM Desktop Enclosure	1272.00
CXA16-AF	i	16 Lines RS423 (DEC MMJ)	2057.00
CXY08-AF	i	8 Lines RS232 with Modem Control	1423.00
Software			
QL-001A2-B4	C	41 - Unlimited User Upgrade	10010.00
QA-001AA-H5	C	VMS Media with Extended Documentation - TK50	3176.00
QA-09SAA-H5	C	VMS Media with Base Documentation - TK50	1252.00
QA-VWJ8A-A8	C	VMS & Layered Product Media - CDROM	791.00
QA-VWJ8B-H8	C	VMS & Layered Product Media + Base Documentation - CDROM	552.50
QA-VWJ8A-H8	C	VMS & Layered Product Media + Extended Documentation - CDROM	2063.00
QA-VYR8A-G8	C	VMS & Layered Product Documentation - CDROM	632.00
QZ-K048A-GZ	C	Hardware Documentation	89.00
QZ-K14AA-U5	C	Diagnostics	178.00



DECsystem 5100

New

A powerful, easy-to-use system in one desktop enclosure

The new DECsystem 5100 is ideal for commercial users wanting a powerful entry level RISC/ULTRIX based system that is both compact and price competitive, with an easy expansion path for future development.

In one attractive desktop unit the DECsystem 5100 delivers an impressive SPECmark rating of 14.9. And with the larger configuration, you have all the advantages of fast installation and a system that's working for you straight out-of-the-box, complete with factory installed software.

More users, faster output

The DECsystem 5100 replaces the DECsystem 3100 and is both faster and equipped for more users. The standard memory can be expanded to 128 Mb with easy to install memory options. A powerful system today that can grow as your business computing requirements demand greater capacity.

The DECsystem 5100 has asynchronous and synchronous ports allowing low-cost connection for up to 12 terminals and full WAN communication capability.

Features

- UNIX system for open systems versatility
- Excellent price/performance
- Up to 128 Mb memory expansion
- Supports TCP/IP, X.25, IBM SNA networks and DECnet
- Integral X Window system support

Configurations to suit your needs

Options are available with the DECsystem 5100 so you can match your system to your exact requirements. Up to five SCSI devices internally and up to seven in total can be supported giving a storage capacity up to 4.4 Gb, external options include an RRD40 drive and SCSI tapes. Up to two dual external expansion boxes may be configured.

Dimensions, Weight and Power:

Height:	5.9"	(149.8 mm)
Width:	18.3"	(464 mm)
Depth:	15.8"	(401.3 mm)
Weight:	45 lbs	(20.4 kg)
Line Voltage:		240V a.c.
Consumption:		170W
Maximum Running Current:		1.55A

Example 12 User System

Part No.	Description
1 DU-51MT4-A9	DECsystem 5100
2 RZ24-EF	209 Mb Disk
1 E0-BN19A-2E	Power Cord
1 DHT80-AA	8 Asynchronous Lines
12 DL-VT420-AE	Terminals
12 E0-BC16E-25	Terminal Cables
1 QA-VYVAA-H5	ULTRIX RISC Software
1 QL-VYVA8-B8	5-8 User Upgrade Licence
1 QL-VYVA8-B6	9-16 User Upgrade Licence

DECsystem 5100/5500 Accessories and Supplies

Terminals	Pages 64/72
Printers	Pages 73/93
Tapes	Pages 120/121
Software (Refer to the DECdirect Software Catalogue)	
Cables	Page 63
Cleaning Products	Pages 116/117
Keyboxes for Media Storage	Pages 118/119
Networking Components	Page 34

Part No.		Description	Price £
System			
DU-51MT1-A9	O	DECsystem 5100, 8 Mb, RZ24, 4-User ULTRIX	8496.00
DU-51MT2-A9	O	DECsystem 5100, 32 Mb, RZ24, 4-User ULTRIX	18700.00
DU-51MT3-A9	O	DECsystem 5100, 8 Mb, 2 RZ24, TZ30, 4-User ULTRIX	12150.00
DU-51MT4-A9	O	DECsystem 5100, 32 Mb, 2 RZ24, TZ30, 4-User ULTRIX	19290.00
Options			
DHT80-AA	I	DECsystem 5100 8-line Asynch Option	792.80
MS44-BA	I	8 Mb Parity Memory Option	2226.00
MS44-DA	I	32 Mb Parity Memory Option	12720.00
E0-BN19A-2E		Power Cord	6.90
Software			
QL-VYVA8-B8	C	ULTRIX 5-8 User Upgrade Licence	668.90
QL-VYVA8-B6	C	ULTRIX 9-16 User Upgrade Licence	1338.00
QL-VYVA8-BS	C	ULTRIX 17-32 User Upgrade Licence	2674.00
QL-VYVA8-BT	C	ULTRIX 33-64 User Upgrade Licence	2499.00
QL-VYVA8-B9	C	ULTRIX 65-Unlimited User Upgrade Licence	2499.00
QL-716AN-AA	C	DECnet-ULTRIX Software Licence	809.90
QA-VYVAA-H5	C	ULTRIX 2-User Base Kit (V4.0)	2302.00
QA-YT9AA-H5	C	DECnet-ULTRIX Media & Documentation	413.40

For storage options see page 19.

Note: only the DU-51MT2-A9 can be configured to the full 128 Mb. Neither base system includes a load device. Factory installed software will be provided on systems with 300 Mb or more of internal storage.

Section Index

62/63	Cable Configurator
53/63	Cables and Connectors
50	Communications Controllers
56/57	DECconnect Cables
35	DECserver 200
35	DECserver 300
36	DECserver 550
48	Ethernet Controllers
42	Ethernet Transceivers
46/47	FDDI
39	Lan Bridges
35/41	Local Area Network Devices
37	MUXserver/DECmux 300 Family
49/51	PC Integration
50	PATHWORKS Server 3100
35/37	Terminal Servers
38	Terminal Servers – Guide
42/45	Wide Area Network Devices

Viewpoint

Digital's announcement of OPEN DECconnect last summer marked the latest development in the DECconnect open multi-vendor cabling system. DECconnect, originally introduced in 1986 as a copper based cabling system, has now evolved into a truly open non-proprietary structured system for both copper and fibre cabling, based upon recognised international bodies such as the Electronics Industries Associations (EIA) and the Telecommunications Industries Association (TIA).

OPEN DECconnect is a structured cabling system capable of supporting a wide range of differing Data connections and protocols, from asynchronous terminals and 10BaseT to 802.3 Ethernet and FDDI.

We have also recently announced the new PATHWORKS Server 3100e based upon the new MicroVAX 3100e CMOS processor. This processor provides a significant performance enhancement over its predecessor, with the additional benefits and flexibility of a single base configuration for DECnet, X.25 or SNA. It offers you the ability to expand your configuration by adding extra disks, memory or tape units as and when they are required.

Both the PATHWORKS Server and the full range of OPEN DECconnect products are featured in this catalogue.

Yours sincerely

Paul Bigwood

Paul Bigwood
Merchandising Manager for
Networks & Communications

DECsystem 5500

New

New faster system for more users

The DECsystem 5500 is Digital's latest ULTRIX-based RISC computer. With a performance rating of 21.5 SPECmarks, it offers faster applications for more users.

This new system has up to twice the performance of the DECsystem 5400, twice the memory and measurably faster I/O. Greater server functionality is provided with CPU, memory and I/O all balanced for maximum performance while maintaining binary compatibility with Digital's other RISC processor-based systems.

Excellent performance, vast storage

The excellent I/O performance is a benefit of the Prestoserve file system accelerator and 64 bit memory bus.

The larger capacity memory allows more users to access the system and the vast disk storage capability is ideal for large databases and other applications requiring a large capacity.

The DECsystem 5500 is housed in an attractive compact pedestal enclosure making it suitable as a deskside system in an office environment. The enclosure has space for four SCSI or DSSI 5¼" storage devices or three if a TK70 is configured and provides three free slots for system memory and nine free Q-bus slots.

Additional storage and Q-bus options may be configured in up to four external expansion pedestals.

The power to support an entire department

The powerful DECsystem 5500 computer is well suited for high-performance applications in areas as diverse as science, engineering, electronic publishing, general business and office automation.

Its file system accelerator makes the DECsystem 5500 a powerful compute or file server and a source of complete integration for all your DECstation and other UNIX-based workstations.

As an 'engine' for multi-user applications, the DECsystem 5500 supports enough terminals for the whole department and can bring the DECwindows environment to terminal users via Digital's new VT1200 and VT1300 terminals.

Whatever the application, Digital's DECsystem family can provide the solution.

Features

- More server functionality
- Upgradeable from the DECsystem 5400
- Highly expandable storage and memory
- I/O expansion through VMEbus, Q-bus, SCSI, DSSI and DSA
- Packaging perfect for office environment
- Binary compatible with all RISC/ULTRIX family products
- Prestoserve increases NFS throughput by up to 50%
- High-performance Ethernet for higher network throughput
- VMS, Q-bus and SCSI gives access to wide range of I/O options

Dimensions, Weight and Power:

Height:	27"	(690 mm)
Width:	20.8"	(530 mm)
Depth:	17.7"	(450 mm)
Weight:	145 lbs	(68 kg)
Line Voltage:		860V a.c.
Consumption:		860W
Maximum Running Current:		6A

DECsystem 5500 System Configuration

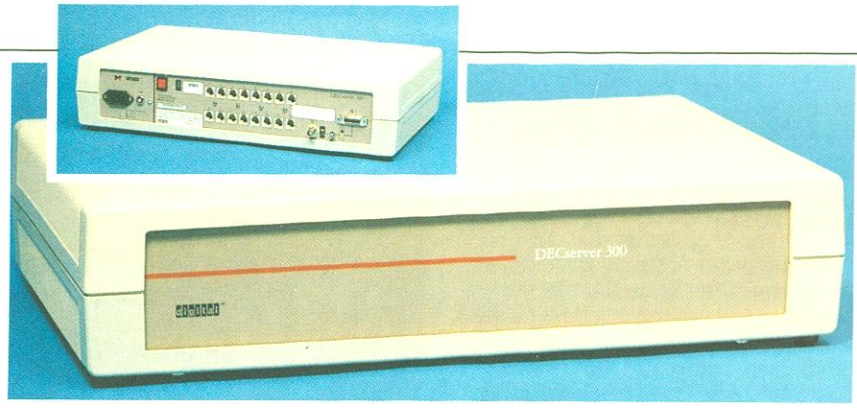
Enclosure	Pedestal
Q-bus Backplane Slots	9 Free
Minimum/Maximum Memory	32/128 Mb
Disk Storage Minimum/Maximum	DSSI/SCSI/SDI
Memory Storage Capacity	381 Mb – 24 Gb
Load/Backup Device	TK70
CPU Performance	21.5 SPECmarks

Part No.		Description	Price £
System			
DU-55HT1-A9	i	DECsystem 5500, 32 Mb Memory, 4-Users	32390.00
Options			
CXA16-AF	i	16 Lines RS423 (DEC MMJ)	2057.00
CXY08-AF	i	8 Lines RS232 with Modem Cable	1423.00
RF31E-AF	i	381 Mb ISE	4770.00
RF72E-AF	i	1 Gb ISE	9540.00
R400X-B9	i	Storage Expansion Pedestal	1785.00
B400X-B9	i	Q-bus Expansion Pedestal	7225.00
RZ56E-AF	i	665 Mb SCSI Disk	3896.00
RZ57E-AF	i	1 Gb SCSI Disk	5565.00
TK70E-AF	i	296 Mb Tape Drive	3657.00
TQK70-SF	i	Controller required for TK70E-AF	1113.00
RRD40-F3	D	600 Mb CDROM Drive	1272.00
MS220-AA	i	32 Mb Memory	19080.00
E0-BN19A-2E	i	Power Cord for CDROM	6.90
BN22E-2E		Power Cord for System Pedestal and Expansion Boxes	6.90
Software			
QL-VYVA8-B8	C	ULTRIX-32 (RISC) 5-8 User Upgrade Licence	668.90
QL-VYVA8-B6	C	ULTRIX-32 (RISC) 9-16 User Upgrade Licence	1338.00
QL-VYVA8-BS	C	ULTRIX-32 (RISC) 17-32 User Upgrade Licence	2674.00
QL-VYVA8-BT	C	ULTRIX-32 (RISC) 33-64 User Upgrade Licence	2499.00
QL-VYVA8-B9	C	ULTRIX-32 (RISC) 65-Unlimited User Upgrade Licence	2499.00
QL-YT9AS-AA	C	DECnet-ULTRIX Software Licence	4177.00
QA-VYVAA-H5	C	ULTRIX-32 (RISC) 2-User Base Kit	2302.00
QA-YT9AA-H5	C	DECnet-ULTRIX Media & Documentation	413.40
QZ-K14AA-U5	C	Diagnostics	178.00

For storage options see page 19.

DECserver 300

Local Connections: introducing greater functionality at a much lower cost-per-line



The LAT terminal server from Digital, the DECserver 300, utilises the very latest technology to enable up to 16 terminals, at up to 19.2 Kb/s, to be connected to your VAX computer at a very competitive cost-per-line.

This member of the Digital terminal server family offers twice the packing density of the popular industry-standard DECserver 200, with 16 rear mounted MMJ connectors.

The DECserver 300 is equipped with both Thick Wire and ThinWire switch selectable Ethernet connectors.

The DECserver 300 supports both RS232 and DEC423 line signalling standards with data flow control using XON/XOFF and/or DTR/DSR. This makes the DECserver 300 eminently suitable for all your local terminal or printer connections to Ethernet. Where remote connections via modems are required, the DECserver 200, DSRVB-AB, provides all the necessary signals to control remote data communications via modems.

The DECserver 300 software has all the advanced features of Digital's LAT and guarantees compatibility with existing applications supported by the DECserver 200. The DECserver 300 is fully compatible with all VAX computers and TSM software.

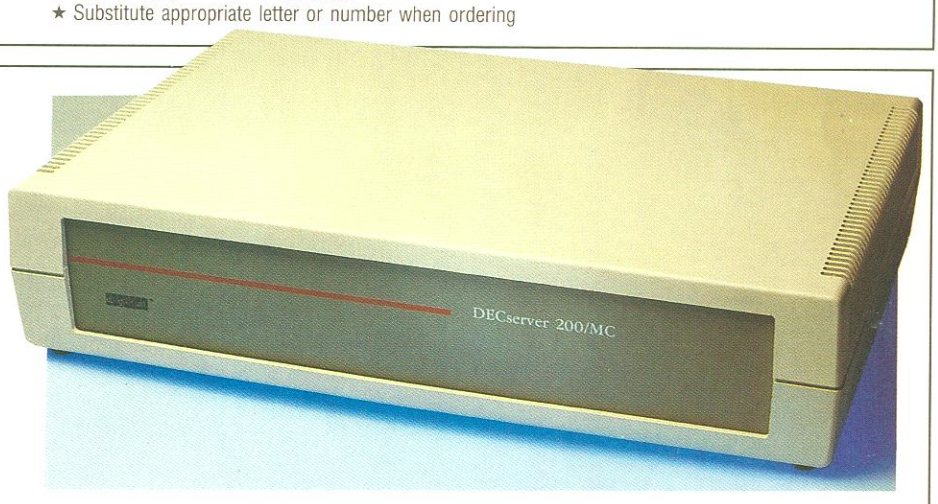
The DECserver 300 is supplied with an installation manual and single-user licence. A country kit is required and must be ordered separately. Where the DECserver 300 is being connected to an existing DB25 (RS232) terminal wiring scheme, an H3117 (16 user terminal patch cord kit) and 16 H8571-C (RS232/DEC423) adapters may be required.

Part No.		*Description*	*Price £*
DSRVF-BB	O	16 Line LAT Terminal Server	3488.00
DSRVF-MA	O	**Bulk Pack** 2 × DSRVF-BB – **save 10%**	6312.00
DSRVF-MB	O	**Bulk Pack** 5 × DSRVF-BB – **save 14%**	14950.00
DSRVF-MC	O	**Bulk Pack** 10 × DSRVF-BB – **save 19%**	28240.00
DL-DSRVF-BB	O	**Special Price** (when ordering DSRVF-BB – with system)	2581.00
DSRVF-KE	O	UK Country Kit	18.90
QA-VTVAA-H★	C	DECserver 300 V1.0 ULTRIX Software Kit	459.50
QA-VTUAA-H★	C	DECserver 300 V1.0 VMS Software Kit	459.50

★ = M for MT9 ★ = 5 for TK50
★ Substitute appropriate letter or number when ordering

DECserver 200

Remote Connections: RS232-C full modem control



The DECserver 200 is a networked terminal server for Ethernet Local Area Networks, running Digital's LAT and is fully compatible with VAX computers. It supports simultaneous operation of up to 8 terminals at speeds of up to 19.2 Kb/s with full duplex.

The DECserver 200 provides RS232-D full modem control to support external users via dial or leased line modems and local RS232 terminals located within the 15 m guidelines.

The DECserver 200 software is located on a host on the Ethernet and down-line loaded on power-up or reinitialisation.

The DECserver 200 requires a country kit, this must be ordered separately. A software licence is included as part of the DECserver 200 system package.

Part No.		*Description*	*Price £*
DSRVB-AB	O	DECserver 200, RS232 version	2412.00
DSRVB-MB	O	**Bulk Pack** 3 × DSRVB-AB – **save 14%**	6191.00
DSRVB-MD	O	**Bulk Pack** 6 × DSRVB-AB – **save 19%**	11700.00
DSRVB-KE	O	DECserver 200 Country Kit	11.30
QA-VDEAA-H#	C	DECserver 200 Distribution and Documentation Kit (ULTRIX)	361.70
QA-VCBAA-H#	C	DECserver 200 Distribution and Documentation Kit (VMS)	361.70

= M for MT9 # = 5 for TK50
= 3 for RX50 # Substitute appropriate letter or number when ordering

DECserver 550

Supports 8 to 128 lines

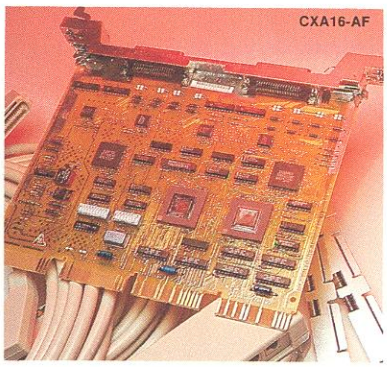
The DECserver 550 is an Ethernet based terminal server capable of connecting large concentrations of terminals, serial printers and modems to one or more hosts on a Local Area Network. It is the high end companion to the DECserver 200 and 300.

The DECserver 550 is ideal as a replacement for a computer room data switch, supporting 128 lines using 8 CXA16 DEC423 line cards, or 64 lines using 8 CXY08 RS232 line cards. It can coexist with or replace existing data PBXs as part of a migration path to Ethernet based LANs.

The DECserver 550 is available in two versions, a rackmount system box (DSRVS-CB) and a standalone floor model (DSRVS-DB). Each box is capable of supporting a combination of up to eight communication controller cards.

A software licence is included as part of the DECserver 550 system box. A media and documentation kit is required for the first DECserver 550.

Please note that a power cord (E0-BN20E-2E) is required for each DECserver 550.



CXY08-AF

8 RS232 full modem control lines

The CXY08 provides eight asynchronous Direct Memory Access (DMA) communication ports from a quad sized module. Each port has full modem control signals thus making this card suitable for connecting remote terminals via modems.

Two, four leg 'octopus' cables are provided with each module for full modem control using RS232-D Terminal connectors.

CXA16-AF

16 DEC423 lines

The CXA16-AF provides 16 asynchronous DMA ports on a single quad sized board. Each port supports data flow signals using XON/XOFF.

The module comes complete with a cable and connection box with 16 MMJ connectors.

The main product features of the CXY08 and CXA16 are:

- Up to 38.4 Kb/s (application dependent)
- DMA or Programme I/O output
- Full modem control (CXY08 only)
- Automatic XON/XOFF flow control
- 256 character receive FIFO buffer
- Comprehensive self test
- No cabinet kits necessary
- RS232-D and DEC423 compatibility

Part No.		Description	Price £
DSRVS-CB	i	DECserver 550 System Box (Rackmount)	12090.00
DSRVS-DB	i	DECserver 550 System Box (Floormount)	12650.00
CXA16-AF	i	16 Line Communications Controller (DEC423)	2057.00
CXY08-AF	i	8 Line Communications Controller (RS232)	1423.00
E0-BN20E-2E		Power Cord	8.30
QA-03KAA-H#	C	DECserver 500/550 VMS Load Software	571-60
QA-VV9AB-H#	C	3270 Terminal Option Software Load Host Kit (VMS only)	357.80

= M for MT9
= 3 for RX50
= 5 for TK50
Substitute appropriate letter or number when ordering

MUXserver/ DECmux 300 Family

Choose from 8 to 48 ports

The MUXserver/DECmux 300 series is a combined terminal server and statistical multiplexer, providing DECserver family functionality to handle between 8 and 48 users concurrently.

MUXserver 310

The cost-effective answer for up to 16 users

The MUXserver 310 is an ideal terminal server for supporting up to 16 concurrent users at one or two locations.

It has all the functionality of the established MUXserver 300 family including full modem control on RS232 lines, reverse LAT, multiple sessions and support for full VT terminals.

DECmux	*No of E0-H3104-B adapters*
DM316-BB	2
DM332-BB	4
CK-DM316-W7	2

MUXserver 300/DECmux300

Remote terminals connection for up to 48 users

The MUXserver 300/DECmux 300 provides remote terminal access to Ethernet LANs for up to six sites and up to 32 terminals (per DECmux 300) per site using leased line communications.

Each MUXserver 300 can accept two composite links at speeds of up to 64 Kb/s. Each composite link can accept up to three remote statistical multiplexers (DECmux 300) in a daisy chain configuration.

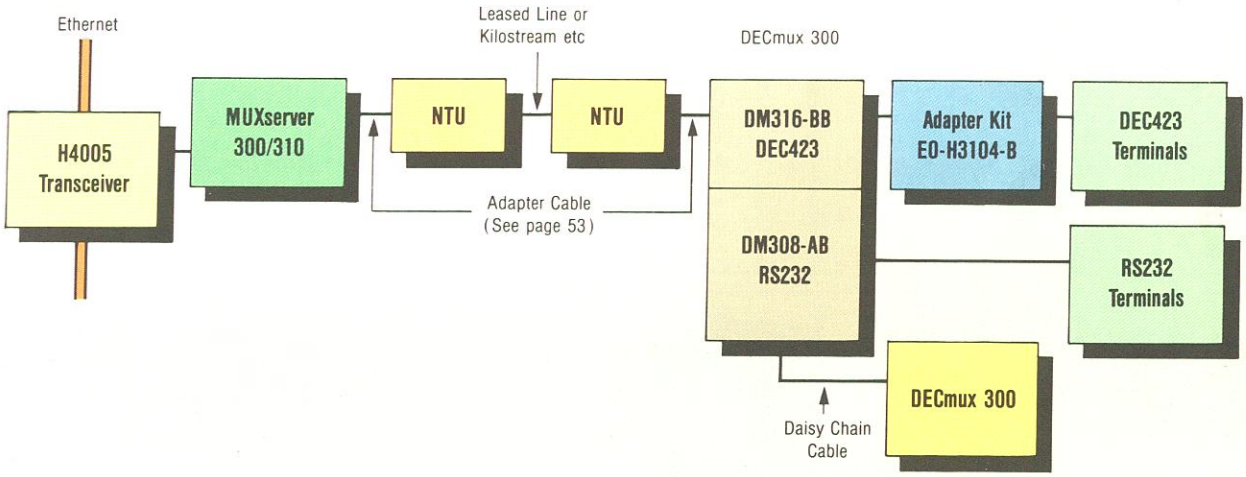
DECmux 300 can be configured for 8 RS232 ports, 16 ports (RS232 or DEC423) or 32 ports (DEC423).

The maximum number of terminals that can be supported by the MUXserver 300 is 192 ports, however only 48 may be concurrently active.

Note: A country kit is required for each MUXserver 300, MUXserver 310 and DECmux 300. An E0-H3104-B is required for every 8 DEC423 terminal ports. See page 53 for details of suitable modem port cables.

MUXserver/DECmux 300 Family Configuration Guide

This guide illustrates server configuration from Ethernet to terminals



NTU = Network Termination Unit

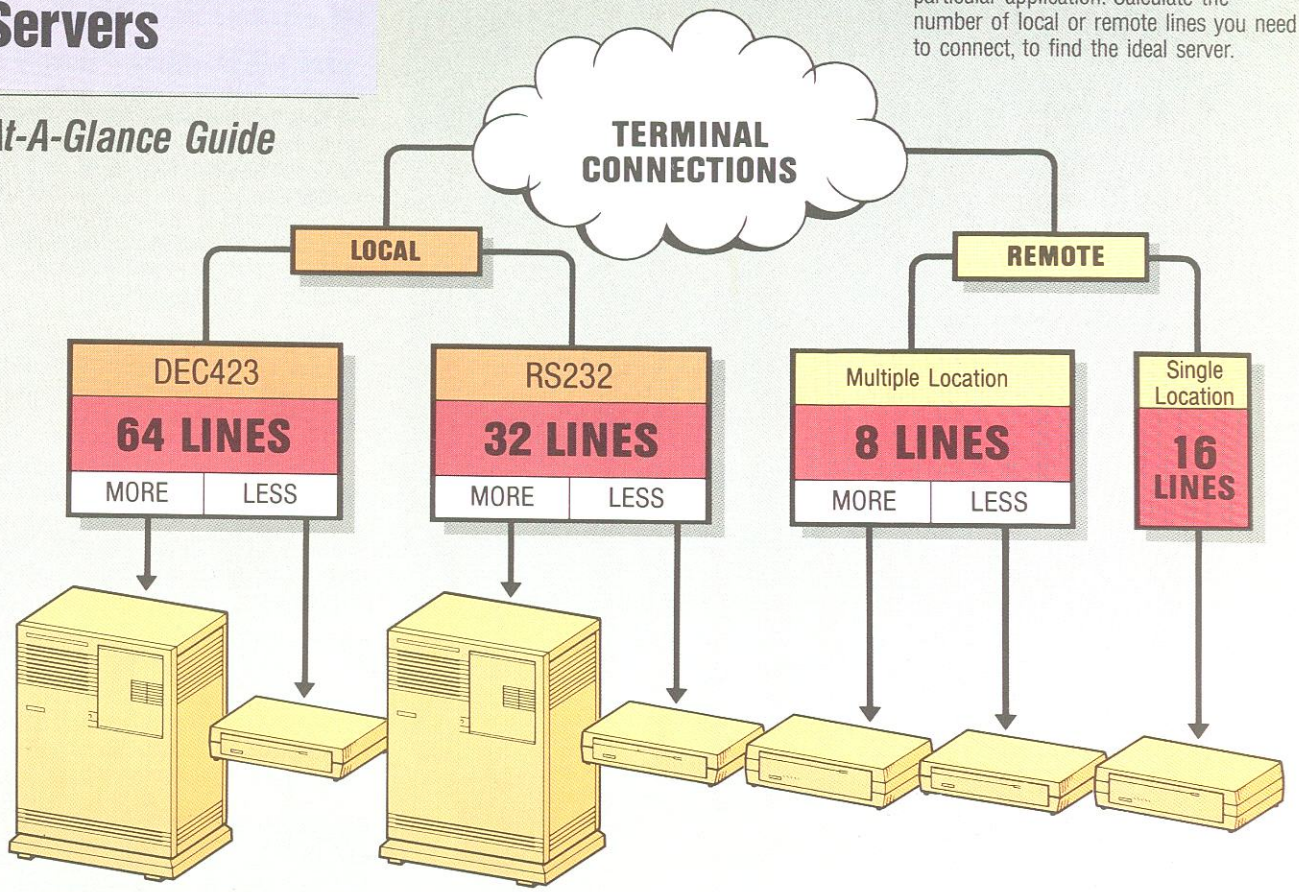
Part No.		*Description*	*Price £*
DSRZC-AB	D	MUXserver 300 Base Unit	6795.00
DSRZC-BB	D	MUXserver 310 Base Unit	3941.00
DM308-AB	i	DECmux 300 8 RS232 Line Unit	2718.00
DM316-AB	i	DECmux 300 16 RS232 Line Unit	4757.00
DM316-BB	i	DECmux 300 16 DEC423 Line Unit	4606.00
DM332-BB	i	DECmux 300 32 DEC423 Line Unit	8909.00
CK-DM308-A7	i	DECmux 300 8 × RS232 Upgrade Panel	2720.00
CK-DM316-W7	i	DECmux 300 16 × DEC423 Upgrade Panel	4760.00
DM300-KE		MUXserver 300 Country Kit	9.10
E0-H3104-B		8 Line Terminal Connector (DEC423)	41.40
QA-VT7AA-H★	C	MUXserver 300 Software V1.0 H Kit VMS	314.00
QA-VZHAA-H★	C	MUXserver 300 Software V1.0 H Kit ULTRIX	314.00

★ = M for MT9 ★ = 5 for TK50 ★ Substitute appropriate letter or number when ordering

Terminal Servers

At-A-Glance Guide

This guide will help you select the terminal server best suited to your particular application. Calculate the number of local or remote lines you need to connect, to find the ideal server.



DECserver 550 (CXA16) see page ◀ 36

DECserver 300 see page ◀ 35

DECserver 550 (CXY08) see page ◀ 36

DECserver 300 see page ◀ 35

MUXserver 300 see page ◀ 37

DECserver 200 see page ◀ 35

MUXserver 310 see page ◀ 37

LAN Device

DELNI

Ethernet-in-a-Box the most cost-effective solution for computer interconnections

Up to eight Ethernet compatible devices (not terminals) can be connected to form an Ethernet Local Area Network without the necessity to separate transceivers and coaxial cable. Please note that a country kit (DELNK-AE) which includes the hardware documentation and power cord must be ordered for each DELNI.

Part No.		Description	Price £
DELNI-BB	0	Ethernet Local Network Interconnect	1153.00
DELNK-AE	0	Country Kit for DELNI	11.30
H3126-AA		Rackmount Kit	8.30

LAN Device

LAN Bridges

IEEE 802.3 compliant

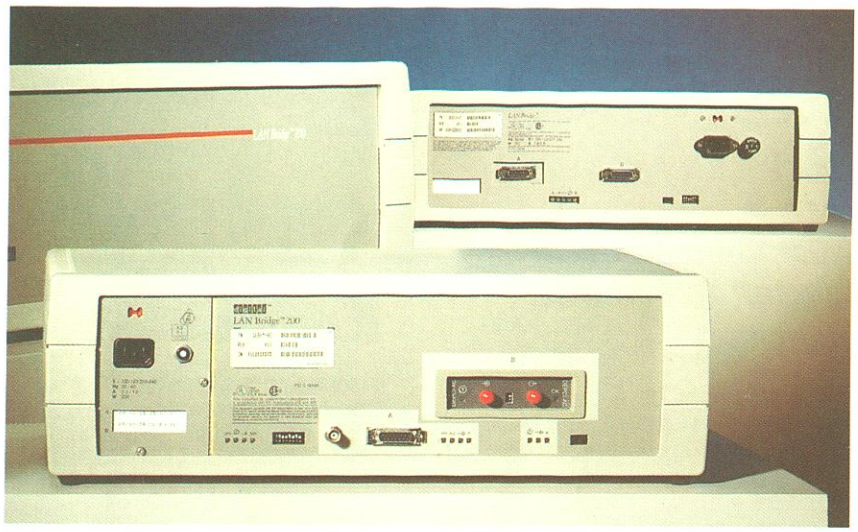
A LAN Bridge enables Ethernet segments to be interconnected to create an extended Local Area Network.

LAN Bridges operate at the physical and data link layer and are therefore protocol independent and transparent to higher level protocols that may co-exist on the Ethernet.

Bridges are active intelligent Ethernet controllers, able to monitor the addresses of packets received, learning which packets are local to either side of the Bridge, and which packets need to be forwarded across the Bridge.

Local traffic remains local, remote traffic is forwarded across the Bridge.

Bridges provide a suitable hardware base to collect statistics on the operation of the LAN. Remote Bridge Management Software (RBMS) V2.0 is an optional software product from Digital for use with the LAN Bridges. It enables the network manager to remotely monitor and control the Bridges on the network, to display traffic statistics of packets received and forwarded or discarded, customise the Bridge database, eg restricting access to particular nodes in the network. RBMS helps understanding of the network topology and can assist with trouble shooting of network problems.



LAN Bridge 150

Low-cost management between LANs

The LAN Bridge 150 is a self learning, two port, IEEE 802.3/Ethernet LAN Bridge. Its primary function is to interconnect two IEEE 802.3/Ethernet LANs and provide traffic management between the LANs. The LAN Bridge 150 filters packets at 24,272 packets-per-sec (pps) and forwards at 13,404 pps. It is a lower cost alternative for customers who do not require the high functionality offered by the LAN Bridge 200.

It automatically manages valuable network bandwidth through traffic isolation, increasing the number of computing resources available to users. Its introduction reflects Digital's continued commitment to IEEE 802.1, 802.2 and 802.3 standards.

The LAN Bridge 150 utilises the LAN Bridge 100 and IEEE 802.1 standard loop detection implementations to provide automatic configurations and auto back-up capability. The LAN Bridge 150 also includes password protection to the Bridge parameters, thus improving network security.

The Bridge is available in local and remote versions. The local LAN Bridge 150 (DEBET-AD) can be used to interconnect two LANs that are separated by no more than 100 metres (328 feet), whereas the fibre-optic remote Bridge (DEBET-RQ) is paired to interconnect two LANs that are separated by up to three kilometres.

If the LAN separation is no more than one kilometre, the DEBET-RQ can be paired with the DEREN-RQ (order through local sales office).

You may upgrade an existing LAN Bridge 100 to a LAN Bridge 150 by purchasing the relevant upgrade kit. Mandatory installation of this upgrade is carried out by Customer Services.

LAN Bridge 200

The high performance LAN Bridge

The LAN Bridge 200 is a high performance dual port Bridge with improved functionality over the LAN Bridge 150.

The LAN Bridge 200 filters data at 29,760 packets-per-sec (pps) and transmits (forwards) at 14,880 pps. These rates are the maximum allowed by the IEEE 802.3/Ethernet specification, and ensure that the Bridge does not create a bottleneck situation during worst case (peak) traffic conditions, and allows the Bridge to perform simultaneously other functions such as loop detection and response to RBMS commands dynamically whilst managing the flow of data traffic.

The LAN Bridge 200 is able to auto-configure between LAN Bridge 100 and IEEE 802.1 spanning tree implementations, thus providing a standards based solution with backwards compatibility.

The LAN Bridge 200 comes complete with a switch selectable Thick and ThinWire Ethernet port, and fibre optic link fault detection. The 16,000 node address table of the LAN Bridge 200 will easily accommodate large networks.

Using RBMS Version 2.0, the auto learning capabilities of the LAN Bridge 200 may be disabled, thus providing the network manager with additional flexibility in configuring which nodes have access to the extended LAN.

Part No.		*Description*	*Price £*
DEBET-AD	0	LAN Bridge 150 Local	4908.00
DEBET-RQ	0	LAN Bridge 150 Remote	5663.00
DEBET-AK	i	LAN Bridge 100/150 Upgrade Kit Local	943.80
DEBET-RK	i	LAN Bridge 100/150 Upgrade Kit Remote	943.80
DEBAM-AB	i	LAN Bridge 200 Local	6417.00
DEBAM-RD	i	LAN Bridge 200 3 km Fibre Optic Cable Remote	7713.00
DEBAM-RG	i	LAN Bridge 200 10 km Fibre Optic Cable Remote	10570.00
E0-BN20E-2E		Power Cord	8.30

LAN Device

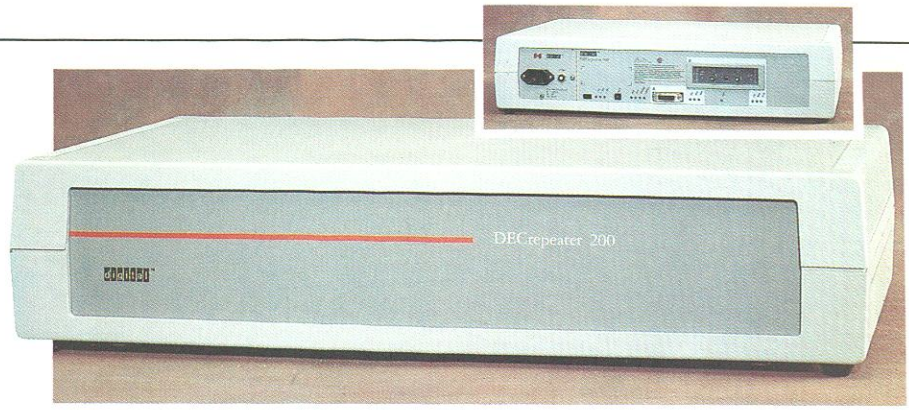
DECrepeater 200

Now full IEEE 802.3 support to Ethernet repeaters

The DECrepeater 200 is the latest addition to Digital's family of Local Area Network (LAN) products designed to be fully compliant with the industry-standard IEEE 802.3, offering all the benefits of multi-vendor interoperability.

If your network needs extending beyond the 500 metre single cable limit, but you don't need the traffic isolation capability of a bridge, then the DECrepeater 200 is the perfect way to extend your LAN.

The DECrepeater 200 connects two segments of standard baseband IEEE 802.3/Ethernet cable to extend the LAN.



It receives signals from one 802.3/ Ethernet LAN segment, and re-transmits or repeats them to another cable segment.

- IEEE 802.3 gives multi-vendor interoperability
- Auto selection of 802.3 or Ethernet for greater flexibility
- Choice of two versions – local or remote fibre optic
- Enhanced self-test simplifies fault isolation
- LED status indicators for faster problem diagnosis
- Easy to install and operate

Part No.		Description	Price £
DEREN-AB	C	DECrepeater 200 Local	1114.00
DEREN-RD	C	DECrepeater 200 Remote Fibre Optic (ST Type)	2076.00
DEREN-RQ	C	DECrepeater 200 Remote Fibre Optic (compatible with LAN Bridge 150)	2076.00
E0-BN20E-2E		Power Cord	8.30

LAN Device

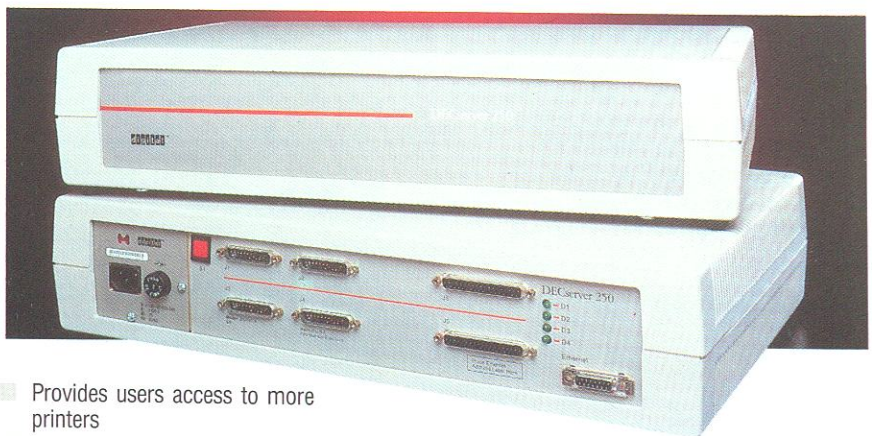
DECserver 250

Now parallel and serial printers on your network

The DECserver 250 supports up to six printers – two parallel and four serial. This latest member of the DECserver family is a network server totally dedicated to handling printers.

Using the DECserver 250 for your printer connections eliminates the need for a dedicated CPU slot, releases valuable CPU processing power and provides faster access to a greater number of users.

For those confidential printouts and beyond the 500 m limitation imposed by backplane connections, the use of a network printer server enables you to locate your parallel printers in more secure areas away from the computer room.



- Provides users access to more printers
- Eliminates dedicated CPU printer connection freeing valuable CPU backplane space
- Remote printers – just where you want them
- Printers can be placed in secure areas
- Parallel ports support printers up to 2000 lines per minute
- Serial ports support speeds up to 19.2 Kbaud on two ports plus 9.6 Kbaud on the others

Part No.		Description	Price £
DSRVP-AB	O	DECserver 250	3039.00
DSRVP-KE	O	Country Kit	9.80
QA-VTMAA-H#	C	DECserver 250 Distribution and Documentation Kit (VMS)	343.50
QA-VTNAA-H#	C	DECserver 250 Distribution and Documentation Kit (ULTRIX)	343.50

= M for MT9 # = 5 for TK50 # Substitute appropriate letter or number when ordering

LAN Device

DEMPR/DETPR

Interconnect 8 ThinWire or Twisted Pair segments

The Ethernet Multiport Repeater, ThinWire or Twisted Pair, provides eight ports for the connection of eight Ethernet segments and one port for connection to an H4005 Transceiver. The DEMPR serves as a repeater between each of its ports.

The DEMPR is ideal for connecting separate ThinWire or Twisted Pair segments (e.g. on a single floor) to a backbone Ethernet that links the different floors.

Note: a country specific power cord (E0-BN02A-2E) must be purchased for each DEMPR-AB.

Part No.		Description	Price £
DEMPR-AB	0	ThinWire Ethernet Multiport Repeater	2039.00
DETPR-AB	0	Twisted Pair Multiport Repeater	1661.00
DETPR-BB	0	Rackmounted DECrepeater 350	1661.00
DETPR-DE	C	DETPR Country Kit	15.10

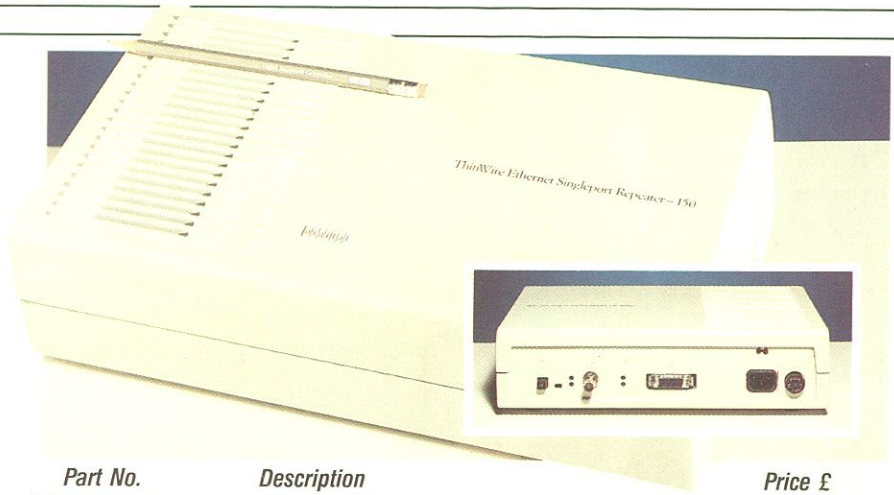
LAN Device

DESPR

For ThinWire to standard Ethernet connection

The ThinWire Ethernet Single Port Repeater (DESPR-EF) provides a means of connecting ThinWire to Ethernet either via an H4005 or to a DELNI.

Note: a country specific power cord (E0-BN02A-2E) must be purchased for each DESPR-EF.



Part No.		Description	Price £
DESPR-EF	0	ThinWire Ethernet Single Port Repeater	705.90
E0-BN02A-2E		Power Cord	6.90

Ethernet Transceiver – ThinWire

DESTA

Gives greater flexibility to the Ethernet controller

The ThinWire Ethernet Station Adapter (DESTA-BA) allows the connection of an Ethernet station or a Terminal Server to ThinWire Ethernet. An Ethernet station can be a personal computer, workstation or departmental computing system with a standard Ethernet Controller (DECNA, DELQA, DELUA, DEBNA, DESVA, DESQA) installed.

The DESTA provides transceiver functionality and is powered from the Ethernet Controller to which it is connected (comes complete with T-connector).

It has been packaged in a similar sized box as the H4005.

See page 55 for details of suitable ThinWire connectors and terminators.

Part No.		Description	Price £
DESTA-BA	i	ThinWire Ethernet Station Adapter	188.80

Ethernet Transceiver – Twisted Pair

H3350

Now a transceiver with Twisted Pair compatibility

Digital's Unshielded Twisted Pair transceiver provides twisted pair connectivity for any device that is equipped with a standard 802.3/Ethernet card. The transceiver connects the 802.3/ Ethernet device to a 10BaseT repeater/ hub. It functions as a transceiver and has an 8 pin interface on the 10BaseT side, and an AUI 15 pin connector on the system side. The transceiver also has LED indicators to monitor link integrity and detect transmission errors.

Part No.		Description	Price £
H3350-AA	C	Unshielded Twisted Pair Transceiver	113.30

Ethernet Transceiver – Thick Wire

H4005

Fully 802.3 compliant

The H4005 Ethernet transceiver provides the functional interface between Ethernet network nodes and the cable. It sends signals over the cable, receives signals from the cable and detects packet collisions that occur.

Features

- Redundant protective circuitry, high noise immunity and an internal self-test
- User selectable heartbeat ensures downward compatibility with the H4000 and H4000-BA
- Compact, only 98 × 88 × 36 mm
- The H4005 is fully IEEE 802.3 compatible

See page 53 for suitable transceiver cables.

The 12-24664-02 transceiver installation kit is required to install the H4005 onto the Ethernet cable.

Part No.		Description	Price £
H4005	C	Ethernet IEEE 802.3 Transceiver	188.80
12-24664-02		Transceiver Installation Kit	24.20

WAN Device

DSV11

Synchronous Communications Controller

The High Performance Controller for MicroVAX Communication to WAN

The DSV11 is the new Q-bus synchronous communications controller for interconnection of Q-bus MicroVAX systems to wide area networks.

The DSV11 is a single quad board with two synchronous communication ports each capable of supporting 64 Kb/s when used in DECnet or X.25 environment and one line at 64 Kb/s for SNA or any combination of the above. The DSV11 also supports one line only at 256 Kb/s for DECnet.

The DSV11 is supported by separate cabinet kits when it is to be installed in a BA23 or BA123 cabinet.

The base option DSV11 comes complete with DSV11 VMS V5.0 device driver on TK50 media, single user licence, documentation kit and two port adapter cables for RS232 and V.35. The extra option contains module and cables only.

See page 53 for details of suitable cables.

Features

- High performance – two at 64 Kb/s or one at 256 Kb/s
- Multiprotocol support – DDCMP, HDLC, SDLC and BI SYNC
- Flexible line interfaces – V.35, RS232 and RS423

Part No.		Description	Price £
For BA2XX series enclosures order:			
DSV11-SF	i	Sync. Communications Controller Base Option	3510.00
DSV11-SG	i	Sync. Communications Controller Extra Option	3398.00
For BA23/BA123 series enclosures order:			
DSV11-AA	i	Sync. Communications Controller Base Option	3133.00
DSV11-AB	i	Sync. Communications Controller Extra Option	3020.00
CK-DSV11-UA	i	Cabinet Kit for BA123	425.00
CK-DSV11-UB	i	Cabinet Kit for BA23	425.00
CK-DSV11-UF	i	Cabinet Kit for H9642	425.00

WAN Device

DEMSA

High Performance DECnet Routers – interconnects LAN into a WAN

Many organisations must maintain not only cost-effective data communications within a facility for local users, but also across a Wide Area Network for remote users as well.

The DEC MicroServer (DEMSA) allows Network users to access destinations across a Wide Area Network, via either a DECnet network, a Packet Switched Data Network (X.25), or an IBM SNA network.

Features

- High line speed support: four lines at 64 Kb/s, two lines at 256 Kb/s, one line at speeds of up to 2.048 Mb/s (256 Kb/s for SNA and X.25) to take advantage of more cost-effective tariffs on higher speed telecommunications services
- High throughput and performance results in improved price/performance and lower cost of network ownership
- Functions as Level II router for DECnet/DECrouter 2000

DECrouter 2000

Provides high-performance synchronous connections to remote DECnet-LAN systems

Features

- Provides synchronous connections to remote DECnet systems and LANs or between remote LANs using DECnet
- Operates at speeds up to 2.048 Mb/s for one line, 384 Kb/s for two lines, 256 Kb/s for three lines and 64 Kb/s for four lines
- Can communicate with remote Phase III nodes in the same DECnet area

X.25router 2000

Provides all the features of the DECrouter 2000 – Plus X.25 networking capabilities!

It acts as an X.25 gateway for an 802.3/Ethernet LAN.

Features

- Performs all the functions of the DECrouter 2000 plus connects systems on the LAN to X.25 PSDNs
- Can run both DECnet and X.25 protocols concurrently
- Compatibility with CCITT X.25 allows users to build global networks using the most competitive worldwide public networks
- Allows DECnet to be connected to up to four X.25 PSDNs simultaneously

X.25portal 2000

Allows multi-vendor systems to communicate across DECnet!

The X.25portal 2000 system package consists of X.25portal software and the DEMSA hardware.

Features

- Provides connection between multi-vendor X.25 DTEs over DECnet/OSI
- Uses same MicroServer base (DEMSA) when the X.25 DTE is upgraded to full OSI
- May be used to run SNA over X.25 over DECnet, providing the efficiency of a single backbone network
- Requires DNS (Distributed Name Services) to operate – for further information call Technical Support.

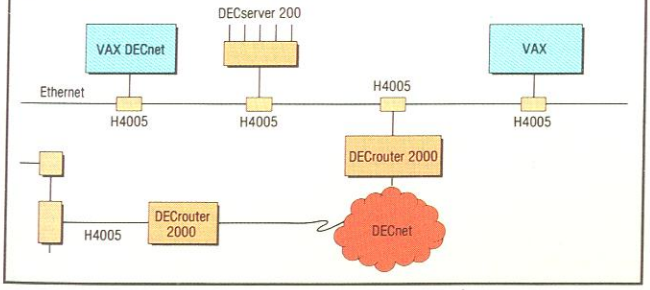
DECnet/SNA Gateway-ST

Provides cost-effective DECnet/ IBM SNA operability

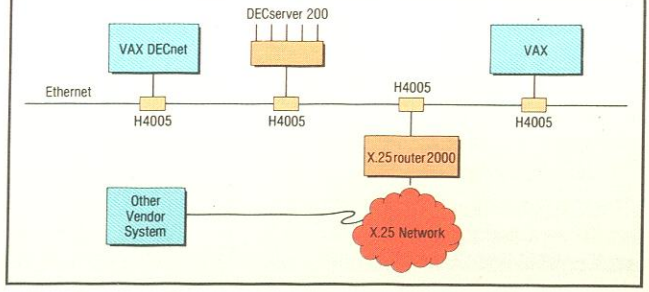
DECnet/SNA Gateway for Synchronous Transport (DECnet/SNA Gateway-ST) is software that runs on the DEC MicroServer. It connects a DECnet 802.3/ Ethernet LAN to as many as four SNA networks over synchronous communications lines.

The DECnet/SNA Gateway-ST connects Digital and IBM networks using a wide variety of Digital Access Routines running under VMS, MS-DOS, and ULTRIX operating environments. Capable of speeds up to 256 Kb/s. DECnet/SNA Gateway-ST is defined to Virtual Telecommunications Access Method

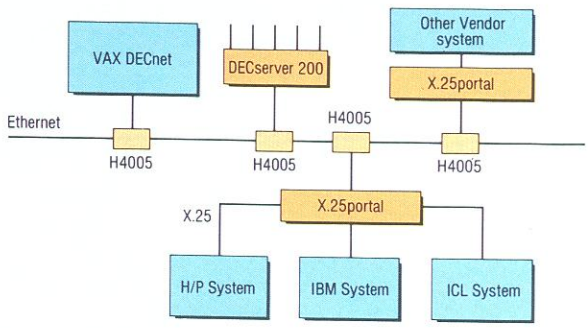
DECrouter 2000



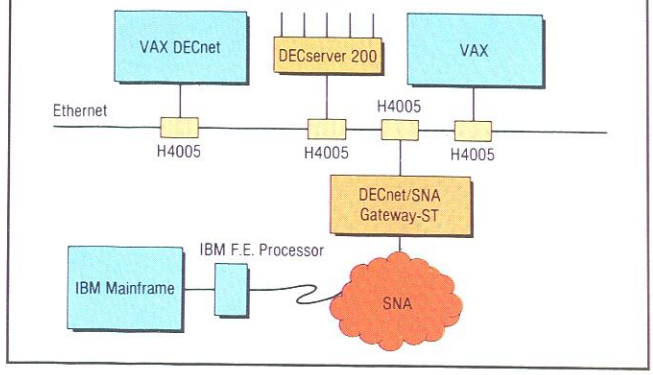
X.25router 2000



X.25portal 2000



DECnet/SNA Gateway-ST



(VTAM) as a physical unit type 2, and can be configured with up to four physical unit type 2 definitions. It supports up to 128 concurrent sessions. DECnet/SNA Gateway-ST is compatible with IBM MVS, VSE/SP, and VM operating systems.

Features

- Provides resource sharing between Digital and IBM equipment
- Superior throughput price/ performance capability compared to DECnet/SNA Gateway V1.X
- Increased concurrent session support
- Faster information transfer speed when using Data Transfer Facility
- Compatible with existing DECnet/SNA access routines and products; no need to rewrite existing applications
- Does not require additional training

Special cables are required to connect the adapter cables to relevant gateway. See page 53 for details of suitable cables.

Configurations

The DEMSA is packaged with the DECrouter 2000, X.25router 2000, DECnet/SNA Gateway-ST, and X.25portal 2000. Each package contains the DEMSA hardware, powercord, four communications adapter cables, and a software user licence.

Media and documentation are required with the first purchase of DEMSA. The software image is installed and configured on the load host which must be on the same Ethernet as the DEMSA. The image is downloaded to the DEMSA.

Part No.		Description	Price £
DEMSA-DE	i	DECnet Router 2000	9513.00
DEMSA-XE	i	X.25router 2000	13080.00
DEMSA-PE	i	X.25portal 2000 Server	13080.00
DEMSA-SE	i	DECnet/SNA Gateway	15860.00
QA-VI8AA-H#	C	DECrouter 2000 V1.0 VMS Media	441.20
QA-VI9AA-H#	C	DECrouter 2000 V1.0 ULTRIX Media	576.40
QA-VI8AA-GZ		DECrouter 2000 V1.0 DOCS only	297.50
QA-VIAAA-H#	C	X.25router 2000 V1.1 Media	485.00
QA-VIAAA-GZ		X.25router 2000 V1.1 DOCS only	272.00
QA-VUHAA-H#	C	X.25portal 2000 V1.0 Media	556.50
QA-VUHAA-GZ		X.25portal 2000 Documentation	191.30
QA-S01AA-H#	C	DECnet/SNA GWY-ST V1.0 Media	477.00
QA-S01AA-GZ		DECnet/SNA GWY-ST V1.0 DOCS only	340.00

= M for MT9 Media # = 5 for TK50 Media # Substitute appropriate number or letter when ordering

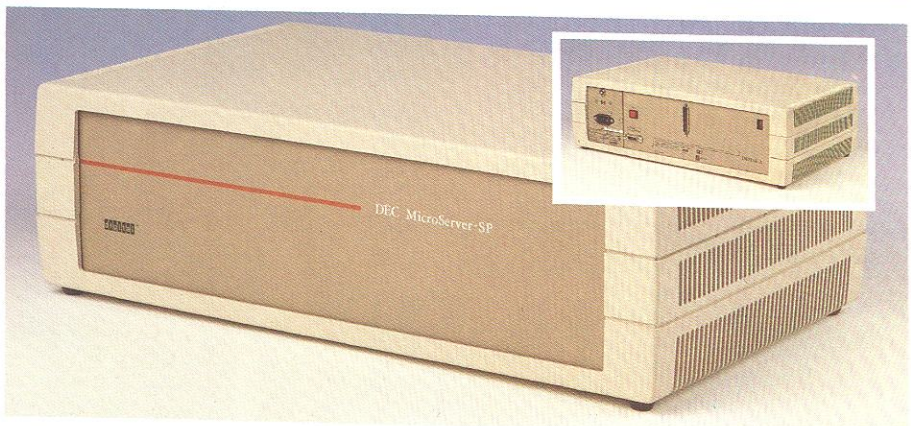
WAN Device

DEMSB

The low-cost MicroServer for WAN connections

- Single line, low-end server for wide area communication
- Provides remote DECnet, X.25 or SNA access for workstations

The DEC MicroServer-SP (DEMSB) is available as a desktop unit or rackmountable. The DEMSB can be



connected to Standard Ethernet or via adapter to ThinWire Ethernet. A short, RS232 adapter cable is supplied with the unit, which connects the synchronous port to a customers modem extension cable. RS423, RS422, V.35 and X.21 (leased line) adapter cables are available as options.

Three server packages are offered, a DECnet Router, a combined X.25 gateway and router and a DECnet/SNA Gateway. All three packages include all the hardware and software components to connect to a customer's modem equipment.

DECrouter 100

The DECrouter 100 package includes a licence for running DECrouter 2000 V1.2 software.

The DEMSB DECrouter 100 can connect a group of any number of PCs on the Ethernet to a remote location using a synchronous DECnet link.

Features

Supports any number of workstations connected by Ethernet
Supports a line speed of up to 64 Kb/s

X.25router 100

The X.25router 100 package offers the added advantage of DECnet routing over X.25 packet switching services.

The X.25router 100 can alternatively be configured to provide full X.25 network access to VMS workstations with VAX PSI Access. This enables a workstation to use a variety of X.25 network features.

Features

Support for up to 16 PCs or workstations on the Ethernet
Supports line speeds of up to 19.2 Kb/s

DECnet/SNA Gateway

The DECnet/SNA Gateway provides Digital workstations or PC users with the ability to access information and applications in an IBM SNA networking environment. It is defined to the SNA network as a Physical Unit Type 2 and can support up to 16 concurrent sessions. The DEMSB SNA package is supplied with DECnet/SNA Gateway-ST V1.1 software and DECnet/SNA Gateway Management V2.0 software.

Features

Supports line speeds of up to 19.2 Kb/s
Supports up to 16 concurrent sessions
Provides Level 1 routing for DECnet/DECrouter 100

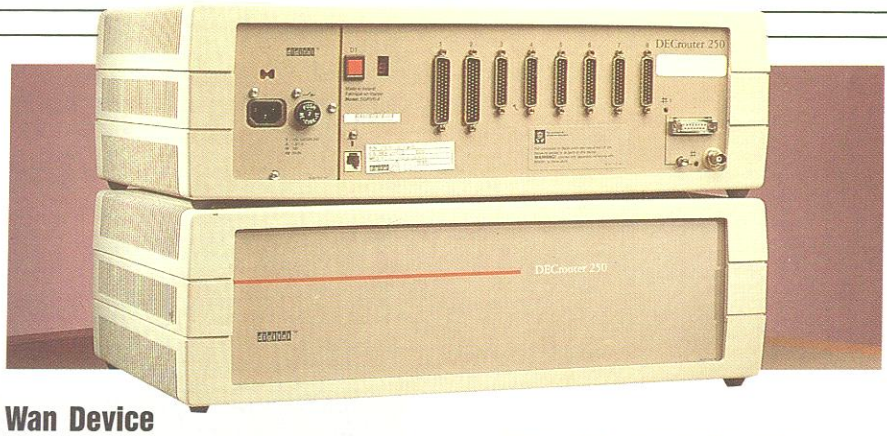
Configurations

The DEMSB is available as a system package, similar to other DEC MicroServer packages. The country kit is included in the package.

Each Package Contains:

DEMSB Hardware
1 RS232 Adapter Cable
Power Cord
2 m Transceiver Cable
Ethernet ThinWire Adapter (DESTA)
Rackmounting Kit
Licence and Warranty for appropriate software package
TK50 Software Media and Documentation Kit

Part No.		*Description*	*Price £*
DEMSB-DE	i	DECnet Router 100	3964.00
DEMSB-XE	i	X.25router 100	4757.00
DEMSB-SE	i	SNA Router 100	7928.00



Wan Device

DECrouter 250

Synchronous and asynchronous low-cost DECnet routing

The DECrouter 250 is the latest member of Digital's Wide Area Networking (WAN) family of router products; a product range with an outstanding record of performance and reliability. It is a low-cost option for connecting PCs and Workstations into a DECnet, over low to medium speed lines.

Giving all the functionality of the DECrouter 200, the DECrouter 250 additionally provides synchronous as well as asynchronous connectivity. It also offers level 2 as well as level 1 routing and line speeds up to 64 Kb/s.

The DECrouter is an Ethernet/802.3 based DECnet, capable of supporting up to 8 serial ports and providing DECnet nodes running DDCMP with access to the Ethernet/802.3 and larger DECnet networks.

The new DECrouter 250 performs adaptive routing utilising all eight asynchronous and synchronous lines and the Ethernet/802.3 port. The benefit is that when communications to an end node might pass through multiple routers, the DECrouter 250 has the capability of choosing the least costly path or, re-routing in case of a line failure. Another benefit is the security feature which supports modem dial-back.

Features

Both Thick and ThinWire interface, switch selectable
Low-cost DECnet routing
Synchronous and asynchronous connectivity
Level 2 as well as Level 1 routing
Dial-back – a major security benefit
Downline loadable via serial ports as well as 802.3 port

Part No.		*Description*	*Price £*
DSRVR-DE	C	DECrouter 250	4530.000
QA-YG6AA-H★	C	S/W Media and Documentation for VMS Load Hosts	254.40
QA-YG6AB-H★	C	S/W Media and Documentation for ULTRIX Load Hosts	254.40
QA-YG6AC-HB	C	S/W Media and Documentation for MS/DOS Load Hosts	254.40
QA-YG6AA-GZ		S/W Documentation Kit	157.30

★ = M for MT9 ★ = 5 for TK50 ★ Substitute appropriate letter or number when ordering

FDDI

Fibre Distribution Data Interface

Digital takes the lead in FDDI technology

Digital, the performance leader in open networks, is now at the very forefront of the leading edge technology FDDI. This new technology is central to Digital's next generation of network solutions, for with FDDI, the very stringent demands of high-performance computing can be met: now and in the years ahead.

FDDI is the first Local Area Network (LAN) standard optimised for fibre optic communications. It has been developed by the American National Standard Institute (ANSI) as an International Standard. Digital has been a leader in the ANSI committee since 1984, and Digital's implementation of FDDI is a full Network encompassing backbone products, workstation and high-performance system adapters, and a comprehensive network management software suite (DECelms). FDDI is the first LAN standard that is not associated with a particular vendor.

FDDI is a second generation, non proprietry LAN technology, clearly complementing Ethernet/IEEE 802.3 and can be used either as a high speed connection for workstations, servers and high performance systems, or as a high speed backbone for IEEE 802.3/Ethernet LANs.

FDDI offers a greater speed (100 Mb/s) and capacity than existing LAN technologies, using fibre optic cable distribution for superior physical security and EMI/RFI immunity.

FDDI networks operate on a dual ring of trees topology, using one ring as the primary ring, the second as a back-up, and the tree topology for increased network flexibility, manageability and availability.

The FDDI standard calls for, along with the fibre-optic cable media and the basic 'ring of trees' topology, specific devices to be used in the network. These devices are concentrators, bridges, and controllers for attaching workstations and systems to the network.

In the event of a failure of the primary ring, FDDI provides for the automatic fallover to the secondary or back-up ring. In the case of the failure of one of the concentrators, bridges or controllers, FDDI provides for the devices either side of the faulty device to loop back to the secondary ring, thus preserving network integrity.

The first FDDI network controller available is the FDDI Controller 700 for the DECstation 5000. FDDI network controllers for the XMI based computers (eg VAX 6000 and VAX 9000) are not currently available.

It is recommended that an existing fibre optic cable be tested for suitability for FDDI, before installation of any FDDI product.

Features

- 100 Mb/s timed token passing ring, makes FDDI significantly faster than current LAN technologies
- Dual ring of trees topology significantly increases network dependability
- Primary and secondary loops wrap, in the case of failure, to maintain network operation and integrity
- Use of a token append protocol allows efficient use of 100 Mb/s bandwidth
- Support for up to 500 stations
- Support for greater geographic span: 200 km of fibre, with up to 2 km station separation
- Specification of 62.5/125 micron multimode fibre and 1300 uM wavelength
- Use of reliable light emitting diodes (LED) as the optical transmitters and photo (PIN) diodes as optical receivers
- Superior EMI and RFI immunity
- Fibre based for superior physical security
- Standards based for multivendor interoperability

Integration of FDDI with existing networks

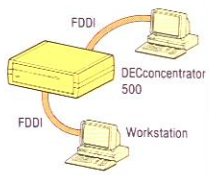
To date, the most popular choice of network technologies has been 802.3/Ethernet, the multivendor LAN standard upon which Digital's LANs are currently based. Because 802.3/Ethernet networks provide flexible, modular growth, customers can expand their computing resources while preserving their investment in existing systems.

Although the demand for FDDI class, high-speed networks is strong, many organisations – from manufacturing and health care to education and aerospace – will continue to build and expand 802.3/Ethernet-based networks. These networks combine flexible growth, reliable operation, and low cost per connection, and will remain attractive to customers for years to come.

FDDI's ability to interoperate seamlessly with existing 802.3/Ethernet networks is a benefit for many organisations that plan to implement high-performance FDDI network backbones. FDDI gives customers the ability to upgrade and integrate their networks at their own pace, without rendering present network equipment unusable or obsolete.

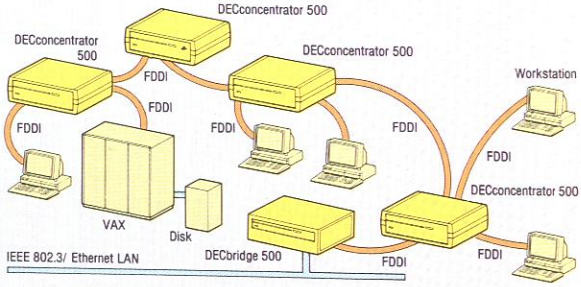
FDDI-in-a-box

The simplest implementation of FDDI is the 'FDDI-in-a-box' using a DECconcentrator 500 and connecting workstations or bridges to the network.



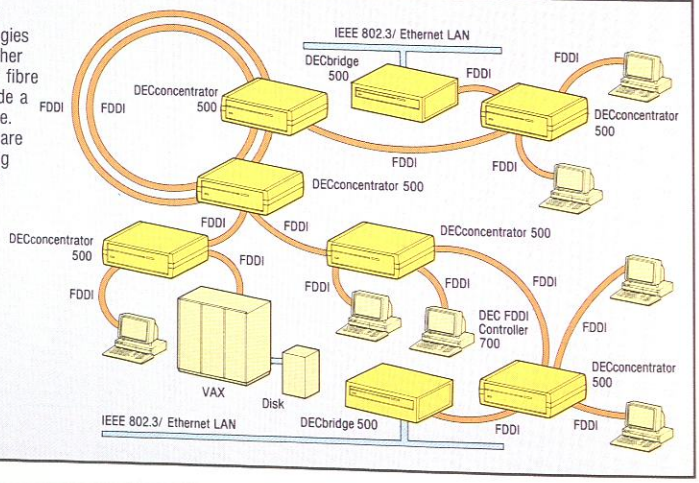
Tree Concentrator

In this example, the 'tree topology' has been used to provide hierarchical interconnections for departmental systems or interconnections to other LANs.



Dual ring-of-trees

In this example two separate tree topologies are connected together using a dual ring of fibre optic cable to provide a high speed backbone. The tree topologies are connected to existing IEEE 802.3 Ethernet LANs using the DECbridge 500.



FDDI

DECbridge 500

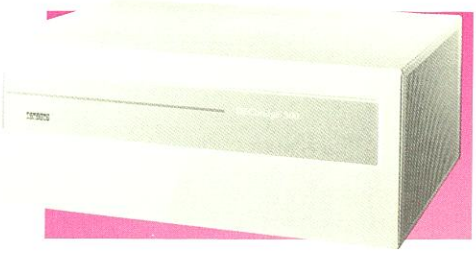
The high performance Network Interconnect Solution

The DECbridge 500 provides the connection between an IEEE 802.3/ Ethernet LAN and a high speed 100 Mb/s FDDI network backbone.

A self-learning, intelligent hardware device, the DECbridge 500 features one FDDI port and one switch-selectable ThinWire/Thick Wire 802.3/Ethernet LAN port.

In addition to standard bridge functions such as filtering and forwarding, the DECbridge 500 performs high-speed, bi-directional transparent translation of network data packets between the FDDI and 802.3/Ethernet frame formats.

Using translation techniques rather than encapsulation, enables interoperability between IEEE 802.3 and FDDI LANs, ensuring network investments, adding FDDI wherever high-performance is required.



Optional Software

DECelms Network management software V1.0 provides management and statistics information for the DECbridge 500 as well as for the LAN Bridge 150 and 200.

The DECelms management software enables advantage to be taken of the many features available in the DECbridge 500, such as the ability to set filtering options, password protection of management access and display of 802.3/Ethernet network utilisation statistics.

Features

- Downline upgradeable firmware simplifies the addition of features and functionality
- Allows transparent forwarding of large FDDI IP packets to 802.3/Ethernet LANs
- Links IEEE 802.3/Ethernet to ANSI FDDI LANs
- Bridges traffic at the maximum allowable 802.3/Ethernet and FDDI speeds
- Address and protocol-type filtering
- Self learning Bridge
- Auto configures between LAN Bridge 100 and IEEE 802.1d
- Translating Bridge – provides interoperability between 802.3/Ethernet and FDDI LAN
- Switch selectable ThinWire and Thick Wire LAN port
- Filters at over 460,000 packets per second forwarding at maximum allowed 802.3 rate of 14,880 packets per second
- Automatic loop and line fault detection

Part No.		Description	Price £
DEFEB-AB	G	DECbridge 500 Standard Optics	18880.00
E0-BN20E-2E		Power Cord	8.30

FDDI

DECconcentrator 500

Low cost entry to FDDI networks

The DECconcentrator 500 provides the connections of FDDI devices, like workstations, systems, DECbridge 500 units or other DECconcentrators, to the FDDI LAN. It is the building block of Digital's FDDI implementation.

The DECconcentrator 500 consists of a rack or desktop box which can accept up to three modules and can be configured in either of two modular configurations:

- As a backbone interconnect offering two ports to primary and secondary FDDI rings, using the network management module (DEFCN-MF) and up to two 4 port station modules (DEFCN-NF) for connection of up to 8 FDDI devices.
- As a standalone device, it can be used to create a small dedicated high performance FDDI LAN offering up to 12 stations using three 4 port station modules (DEFCN-NF).

Your network configuration will determine which boxes and modules you will need to order for your network. There are 3 slots in the DECconcentrator 500 box.

FDDI dual ring configurations will require a single network management card per DECconcentrator 500 box, and up to two 4 port station cards per box.

Features

- Provides connection of systems and subnetworks to FDDI LAN
- Promotes creation of "dual ring of trees" topologies
- Accommodates multiple Single Attachment Station (SAS) interconnections
- Provides reliable operation and high network availability to all attached stations
- Allows flexible options for configuration, either in a high-performance FDDI backbone, or as a standalone FDDI hub for workground interconnections
- Provides standards-compliant (X3T9.5) data link level control of stations and links, via the SMT (Station Management) component of the ANSI FDDI specification
- Features on-board firmware and diagnostics for self-test and loading of operational code at power-up
- Incorporates downline-load upgrade capability to implement firmware changes without swapping modules or chips
- May be remotely managed, via Digital's DECelms (Extended LAN Management Software) application, running on a networked VAX system
- Incorporates a modular design, giving customers the flexibility to add ports economically and as necessary
- Desktop or rack mountings

Part No.		Description	Price £
DEFCN-AB	G	DECconcentrator 500 Rack Mount Box	2265.00
DEFCN-BB	G	DECconcentrator 500 Desktop Box	2265.00
DEFCN-MF	G	Network Management Module	2265.00
DEFCN-NF	G	4 Port Station Card	3398.00
E0-BN20E-2E		Power Cord	8.30

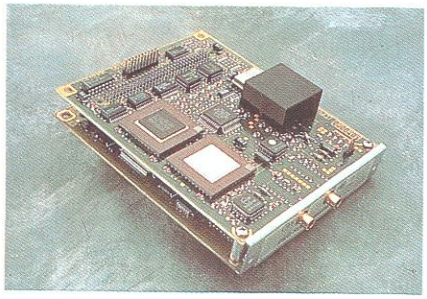
Note: all models include installation instructions. A separate power cord kit is required.
Refer to DECdirect Software catalogue for details of DECelms management software.

FDDI

DEC FDDI Workstation Controller 700

Perfect for network intensive applications like CAD/CAM

The DEC FDDI controller 700 attaches directly to the FDDI ring through the DECconcentrator 500 as a Single Attachment Station (SAS). SAS Workstation connections give the end user added protection from network disruption and allow for more flexible, manageable network configurations. This new controller enables high-performance



workstations to take advantage of applications that use network based resources.

DECstation 5000 Model 200 workstations can use the FDDI controller 700 to provide an entry-level IP router for an FDDI workgroup needing access to an 802.3/Ethernet backbone, and with two FDDI controller 700s installed, the workstation can provide an entry-level IP router between an FDDI workgroup and an FDDI backbone.

Features

- Low cost direct FDDI SAS for all TURBOchannel workstations
- Plugs directly onto TURBOchannel bus interface using only one TURBOchannel slot
- DEC FDDI controller 700 is ANSI compliant
- Ideal for applications like CAD/CAM and image analysis
- Enables tightly coupled, high-performance work groups at FDDI speeds
- Serves the needs of high bandwidth workstation graphics applications
- SAS connection to DECconcentrator 500 allows non-disruptive addition/removal of workstations and servers

Part No.		Description	Price £
DEFZA-AA	C	DEC FDDI Controller 700	4770.00

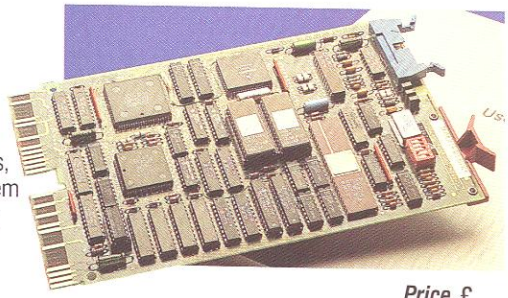
Ethernet Controller

DELQA-YM

Now faster with 20% increased performance

The latest version of the DELQA communications controller has a 20% performance enhancement. It connects Micro PDP-11 and MicroVAX II systems to both Ethernet and IEEE 802.3 Local Area Networks.

The DELQA provides the firmware capability to support Maintenance Operation Protocol (MOP) which offers enhanced network management features, including: remote circuit loopback, system identification messages, remote booting of diskless systems.



Part No.		Description	Price £
DELQA-YM	i	Ethernet to Q-bus Turbo Communications Controller	2227.00
CK-DELQA-YA	i	Cabinet Kit for BA123 and BA11-M Boxes	136.50
CK-DELQA-YB	i	Cabinet Kit for Micro PDP BA23 Box	136.50
CK-DELQA-YF	i	Cabinet Kit for H9642 Cabinet	136.50

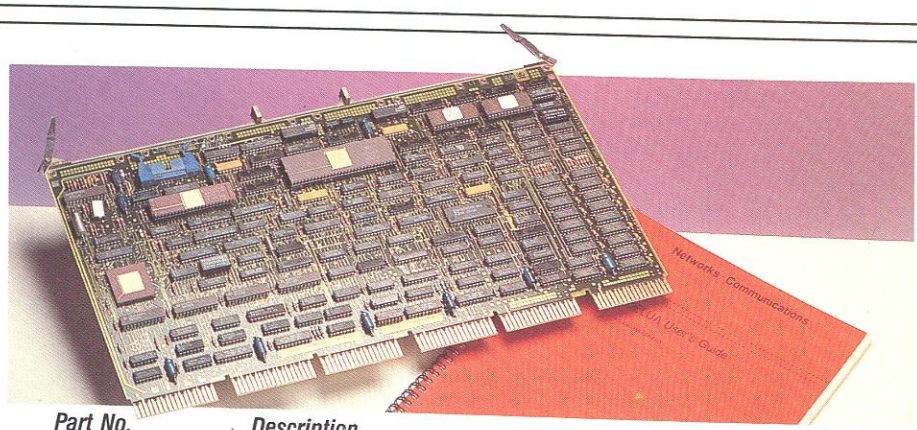
Ethernet Controller

DELUA-M

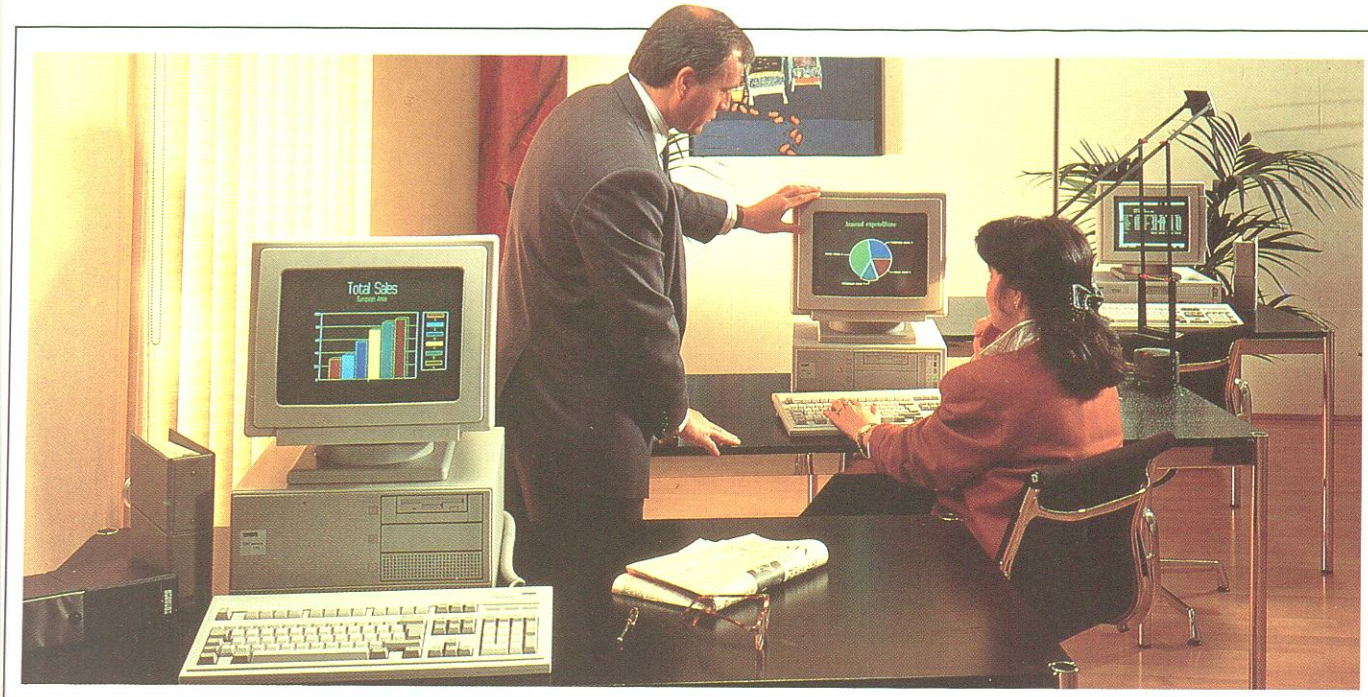
Connects UNIBUS to Ethernet and IEEE 802.3

The DELUA high performance synchronous communications controller connects UNIBUS systems (VAX and PDP) to both Ethernet and IEEE 802.3 Local Area Networks.

It operates at full Ethernet speed of 10 Mb/s and has an 80 Mb buffer supporting full DMA access.



Part No.		Description	Price £
DELUA-M	i	UNIBUS to Ethernet Controller	3851.00
CK-DELUA-KM	i	Cabinet Kit for general use with Shielded Cabinet	204.80
CK-DELUA-K1	i	Cabinet Kit for non FCC, non Shielded Cabinets	204.80



PC Integration

How to better utilise your PCs in the Network

The rise in popularity of Personal Computers has brought many benefits to the desktop. Digital offers a means of fully integrating your PCs with your network providing a simple and flexible way of sharing information and data with other users on the networks.

Personal Computing Systems Architecture (PCSA) is Digital's solution and is based upon a client/server relationship. The server is a VAX computer connected to the network with PCSA running as a layered application called PATHWORKS for DOS etc. PCs connected to the network by means of an Ethernet controller, and running PATHWORKS for DOS, are the clients.

PATHWORKS provide services for the PCs, such as: Application, Disk, File and Print Utilities. These appear as additional disks or files on the PC.

File Services allow access to the same files stored on the Server to both MS-DOS and VMS.

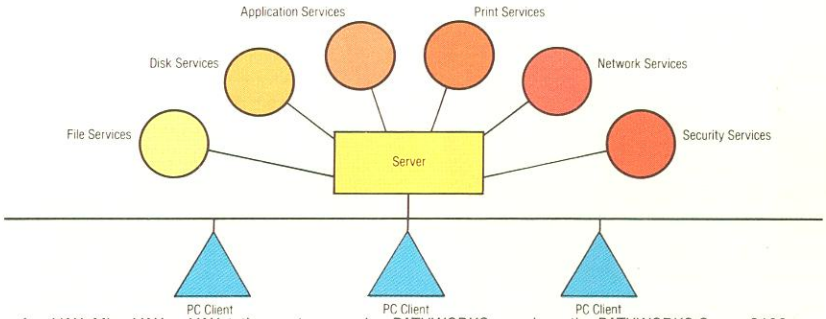
Disk Services allocates space on a VMS disk within a RMS file, as a virtual disk for the client PCs to store MS-DOS applications.

Networked Printers appear as additional local printers to the PC.

Virtually any VAX, MicroVAX or VAXstation can be used as a server for PCs.

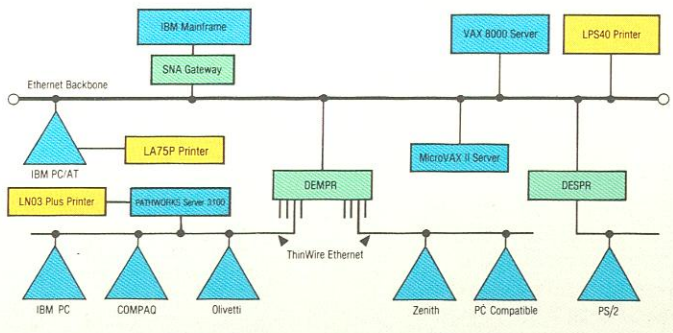
The licence for PATHWORKS is included in DECnet VAX. Each PC client will require a client licence. Only one media and documentation kit is required for both the server and client. Subsequent servers and clients can use the same media.

PC Client-Server – PATHWORKS Environment



Any VAX, MicroVAX or VAXstation system running PATHWORKS – such as the PATHWORKS Server 3100 – provides services, system resources and shared capabilities to any PC anywhere on the DECnet network.

Typical PCSA Network



PATHWORKS Server 3100e

New

Now you can integrate any industry-standard PC into a Digital network

The widespread use of PCs in business today necessitates the ability for them to communicate efficiently together. But simple interconnection is not the answer. Integrating PCs into one network capable of communicating, with each other, and non PC users of the network, is. This way you have all the advantages of exchanging applications and data, and sharing expensive resources – like laser printers. The PATHWORKS Server 3100e offers total integration of your PCs ensuring you get the best and most effective use from them.

Using a PATHWORKS Server 3100e means you can integrate up to 64 industry-standard PCs into your Digital network. In fact, more than 64 PCs can be accommodated depending upon the application mix and the degree of simultaneous access to the network.

The PATHWORKS Server 3100e has been specially designed to meet the needs of PC users whether working in small or large PC networks, and incorporates Digital's DECnet networking and award-winning PC integration software.

One PATHWORKS Server 3100e provides application, disk file services, support for shared resources, such as printers and plotters, and the ability to communicate with any other node on the network using PCmail.

PCmail provides PC users with a powerful electronic mail system that can communicate with other users on the network and into Wide Area Networks (WANs) through gateways. PCmail comes with a powerful Full Screen Editor (SEDT) but can be simply reconfigured for your favourite editor, provided it is capable of storing data in ASCII format.

Continued growth for tomorrow

As your company grows it's likely your network will need to expand too. Your investment in integration is protected since PC networks using PATHWORKS Server 3100s can be simply connected together using standard ThinWire Ethernet components or to a Thick Wire Ethernet network using a DESPR (Thick/ThinWire) repeater.

The PATHWORKS Server is capable of communications across WANs using the DSH32 synchronous controller for DECnet/X.25 WAN, or the DEMSB MicroServer for SNA Gateway WAN.

Using the new 3100e CPU which offers up to 45% performance enhancement depending upon application, the new PATHWORKS Server 3100e is available in a choice of basic configurations: DECnet, X.25 and SNA. Each has a RZ24 (209 Mb) drive, TZ30 (95 Mb) tape unit, and 8 Mb of main memory with a DSH32 synchronous comms board for X.25 or DEMSB-SE for SNA configurations.

The server can be expanded up to 32 Mb of main memory and up to 4.8 Gbs of online storage. Each system comes with factory installed VMS and Server Software, and easy to follow instructions to enable quick and trouble free installation of PCs.

Most importantly, the PATHWORKS Server 3100e provides not only cost-effective use of your PCs, but investment protection for the future. The PATHWORKS Server 3100 provides incremental growth without any disruption to your existing network environment.

Features

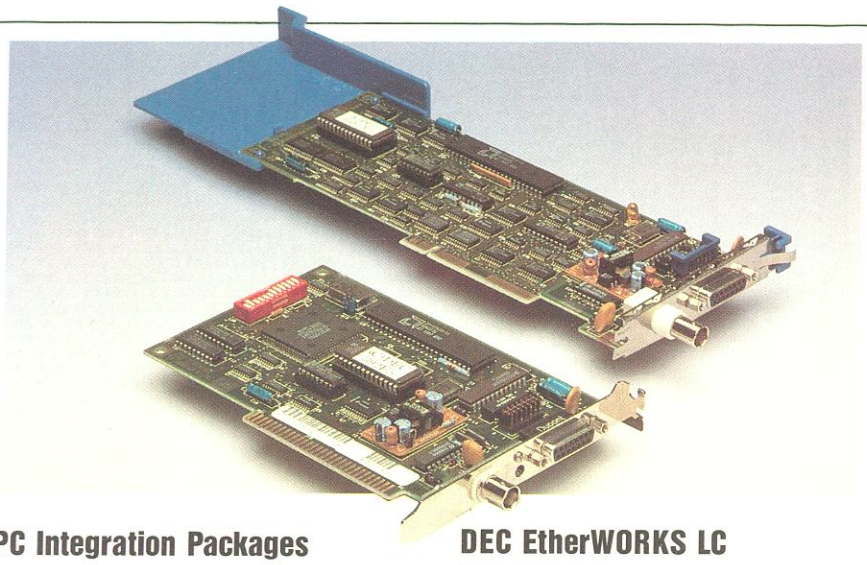
- Integrates up to 64 PCs – or more!
- One package contains both hardware and software
- Perfect solution to small business/ departmental PC integration
- User friendly menu-driven software

Note: Console terminal device not included with PATHWORKS Servers.

Information on DEC EtherWORKS controllers, can be found on the opposite page.

If you require more information or assistance to determine the best configuration to suit your needs.

Part No.		*Description*	*Price £*
DJ-31EP2-A9	C	PATHWORKS Server 3100e DECnet	9438.00
DJ-31ER2-A9	C	PATHWORKS Server 3100e X.25	11480.00
DJ-31ER4-A3	C	PATHWORKS Server 3100e SNA	11780.00
E0-BN19A-2E		Power Cord	6.90
FC310-AE	D	Country Kit (H/W Documentation and Cables)	60.40



PC Integration Packages

DEC EtherWORKS

New possibilities for PC integration

Three new Ethernet controllers now give you a greater choice and, open up new possibilities for PC integration.

The new controllers, known as Digital EtherWORKS, are supported by DECnet and PATHWORKS client software for DOS and OS/2.

Features

- Supports PCSA and multivendor PCLAN software solutions
- Self-test firmware using 16 Kb ROM
- Remote boot facility – both ROM and floppy based

DEC EtherWORKS Turbo

A new, proven 16 bit, high performance PCLAN Ethernet controller designed specifically for PC-based LAN services, like Digital's OS/2 board servers, and high-end client PCs based on PC/AT and EISA compatible.

Features

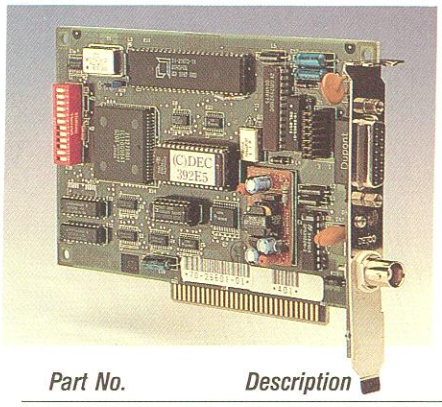
- PC/AT and EISA compatible packaging
- 16 bit data path and 64 Kb RAM for high performance
- Ethernet V2.0 and IEEE 802.3 support
- ThinWire (BNC) and Thick Wire (AUI) interface connections
- Software drivers for DOS and OS/2 on $3\frac{1}{2}$" and $5\frac{1}{4}$" floppies
- Ethernet BNC Terminator and 'T' connector

DEC EtherWORKS LC

This is an 8 bit, half slot, multi-buffered PCLAN Ethernet controller for PC/XT and low end PC/AT compatibles. It has all the functionality of the outgoing DEPCA module but at a significant price saving.

Features

- PC/XT half slot compatible packaging
- 8 bit data path and 64 Kb RAM for multi-buffering
- Ethernet V2.0 and IEEE 802.3 support
- ThinWire (BNC) and Thick Wire (AUI) interface connections
- Software drivers for DOS and OS/2 on $3\frac{1}{2}$" and $5\frac{1}{4}$" floppies
- Ethernet BNC terminator and 'T' connector supplied



DEC EtherWORKS Turbo/TP

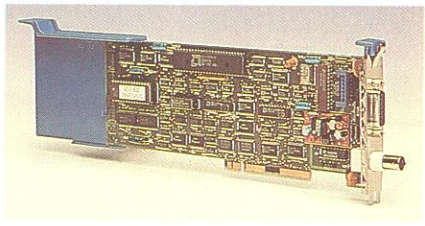
This new controller has been specifically designed to comply with 10 base T standard V1.0. The Turbo/TP has the same functionality as the EtherWORKS Turbo but utilises Unshielded Twisted Pair cabling as opposed to ThinWire Ethernet.

Features

- PC/AT and EISA compatible packaging
- 16 bit data path and 64 Kb for high performance
- Ethernet V2.0 and IEEE 802.3 support
- Twisted Pair (RJ45) and Thick Wire (AUI) interface connections
- Software drivers for DOS and OS/2 on $3\frac{1}{2}$" and $5\frac{1}{4}$" floppies

DEC EtherWORKS MC

The DEMCA is a high-performance multi-buffered 16 bit Ethernet controller for PS/2 systems and compatibles. The DEMCA supports Digitals DECnet and PATHWORKS client software for DOS and OS/2.



Features

- Microchannel architecture support
- 16 bit data path and full 64 Kb RAM
- Ethernet V2.0 and IEEE 802.3 support
- Software driver for DOS and OS/2 on $3\frac{1}{2}$" and $5\frac{1}{4}$" floppies
- ThinWire (BNC) and Thick Wire (AUI) connectors
- ThinWire terminator and 'T' connector

Note: packages consist of relevant board and MS-DOS client licence.

DEC EtherWORKS controllers do not support the Digital Mouse. In a PATHWORKS environment they should be used with a Microsoft compatible mouse.

Part No.		Description	Price £
DE100-AA	C	DEC EtherWORKS Controller LC	222.70
DE100-PA	C	DEC EtherWORKS LC Package	351.10
DE200-AA	C	DEC EtherWORKS Controller Turbo	298.20
DE200-PA	C	DEC EtherWORKS Turbo Package	422.80
DE201-AA	C	DEC EtherWORKS Controller Turbo/TP	298.20
DE201-PA	C	DEC EtherWORKS Turbo/TP Package	422.80
DE210-AA	C	DEC EtherWORKS MC Controller	373.70
DE210-PA	C	DEC EtherWORKS MC Package	494.50
BNE4G-02		2 m AUI Cable	58.00
QL-YFWAW-AA	C	PATHWORKS for OS/2 Client Licence	177.50
QL-0TLA9-AA	C	PATHWORKS for DOS V3.0 Client Licence	177.50

VAXBI Asynchronous/ Synchronous Communications Controllers

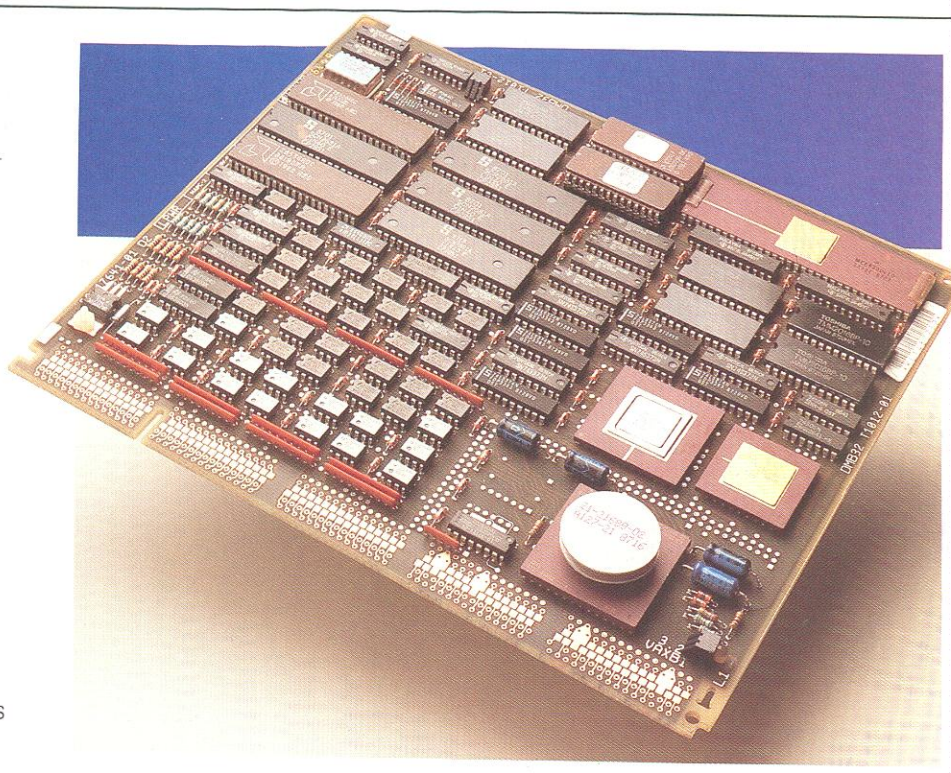
DMB32-M provides 10 DMA lines on VAXBI

The DMB32 provides ten Direct Memory Access (DMA) communications lines for the VAXBI family of computer systems. It provides eight asynchronous terminal or modem lines, one synchronous line and one parallel printer line.

Features

- 8 Asynchronous communications lines RS232-C compatible
- Asynchronous line speeds up to 38.4 Kb/s
- Synchronous line speeds up to 64 Kb/s
- DMA output optimises terminal I/O performance
- Full modem control
- 1 synchronous port RS232-D, RS422-A, RS423-A and V.35 compatibility
- DMA input and output
- Parallel printer line supports a wide range of Digital parallel printers
- Comprehensive self-test facilities

For synchronous communications the appropriate device driver software must be installed. The DMB32 is supported by the VMS V4.4 or later.



Part No.		Description	Price £
DMB32-M	ⓘ	8-Line Async; 1-Line Sync, 1-Line Parallel, DMA Terminal Interface	3968.00
CK-DMB32-LJ	ⓘ	Cabinet Kit for Shielded Cabinets (VAX 6200, VAX 8500, VAX 8700, VAX 8800)	955.50
CK-DMB32-LM	ⓘ	Cabinet Kit for Shielded Cabinets (VAX 8200, VAX 8300)	955.50
CK-DMB32-LN	ⓘ	Cabinet Kit for Expansion Cabinet (VAX 8700, VAX 8800)	955.50

See page 53 for details of suitable cables.

Q-bus Asynchronous Communications Controllers

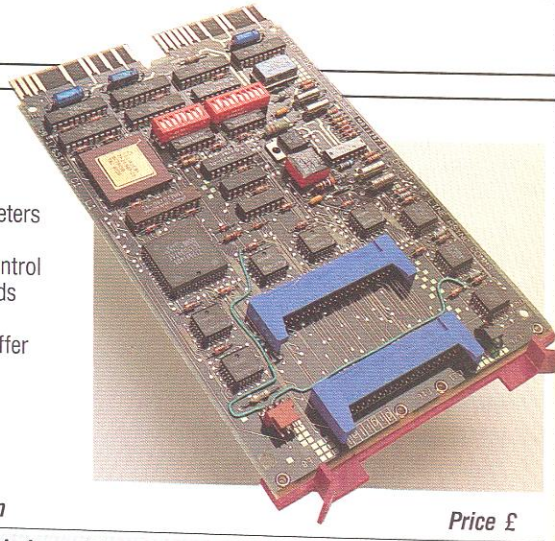
DHQ11-M for RS232 and DEC423

The DHQ11 provides eight asynchronous Direct Memory Access (DMA) communications lines on one dual size module. It supports RS232-D with full modem control or DECconnect DEC423 signalling standard.

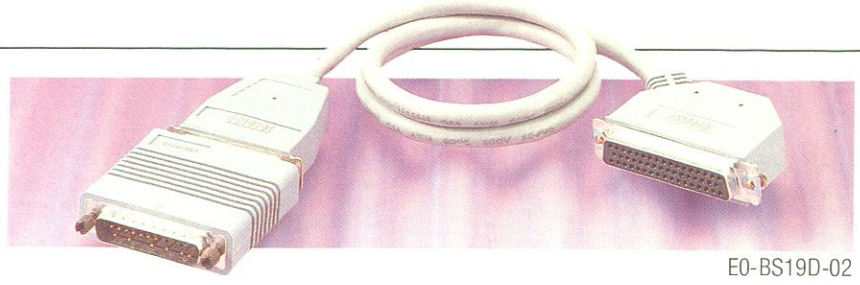
The DHQ11-M is ideal for connecting local terminals, modems and printers to MicroVAX II and Micro PDP-11 computer systems.

Features

- Full duplex line speeds up to 38.4 Kb/s
- Software programmable parameters for individual lines
- XON/XOFF and modem flow control
- Split receive and transmit speeds
- DMA or programmed output
- 64 characters FIFO transmit buffer
- Optimises I/O without CPU intervention
- Extensive automatic on-board diagnostics



Part No.		Description	Price £
DHQ11-M	ⓘ	8-Line, DMA, Async. Terminal Interface	1148.00
CK-DHQ11-AA	ⓘ	Cabinet Kit for RS232 connection BA123 Box	273.00
CK-DHQ11-AB	ⓘ	Cabinet Kit for RS232 connection BA23 Box	273.00
CK-DHQ11-AF	ⓘ	Cabinet Kit for RS232 connection H9642 Cabinet	273.00
CK-DHQ11-WA	ⓘ	Cabinet Kit for DEC423 connection BA123 Box	364.00
CK-DHQ11-WB	ⓘ	Cabinet Kit for DEC423 connection BA23 Box	364.00
CK-DHQ11-WF	ⓘ	Cabinet Kit for DEC423 connection H9642 Cabinet	364.00



E0-BS19D-02

Synchronous Communication Adapter Cables

This table lists the part numbers of cables required to connect a synchronous adapter to modems or Network Terminator Units (NTUs) like Kilostream.

Synchronous adapters

DEMSA, DEMSB, DSV11, DMB32, MUXserver 300, DECmux 300

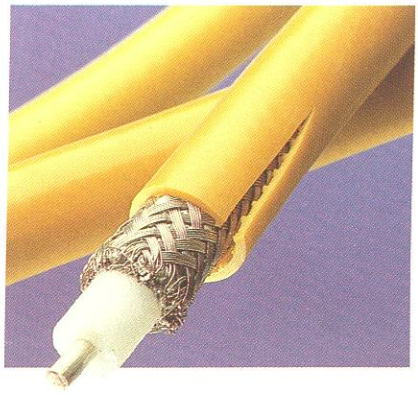
Modem or NTU		*Cable Part No*
V.24	Main	E0-BS19D-02
	Extension	E0-BC22F-10/25/50
V.35	Main	BC19F-02
	Extension	BC19L-25
RS422	Main	BC19B-02
	Extension	BC55D/50
RS423	Main	BC19E-02
	Extension	BC55D/50
X21		Call Technical Support
DECmux 300 Daisy Chain		BC19Y-10

Part No.	*Description*	*Price £*
BC19B-02	2 ft RS422 Sync. Adapter Cable DMB32	31.10
BC19E-02	2 ft RS423 Sync. Adapter Cable DMB32	31.10
BC19F-02	2 ft V.35 Sync. Adapter Cable DMB32	41.40
BC19L-25	25 ft V.35 Cable, Extends BC19F-02	134.50
BC19Y-10	10 ft Unit Daisy Chain Cable	86.30
BC55D-25	25 ft RS422 RS423 EIA Extension Cord	82.80
E0-BC22F-10	10 ft CCITT V.24/V.28 25 Wire Modem Extension Cable	33.10
E0-BC22F-25	25 ft CCITT V.24/V.28 25 Wire Modem Extension Cable	44.20
E0-BC22F-50	50 ft CCITT V.24/V.28 25 Wire Modem Extension Cable	65.60
E0-BS19D-02	2 ft V.24 Sync. Adapter Cable DMB32	27.60

Ethernet Coaxial Cables

Ethernet baseband coaxial cable – the main transmission medium of the Local Area Network

Available in PVC and Teflon insulated, it is ideally suited to Ethernet transmission needs. Both lines are compatible with all Ethernet hardware and are used with an H4005 transceiver.



Only use the recommended Digital cable for your equipment

Part No.		*Description*	*Price £*
E0-BNE2B-MA		23.4 m PVC	113.90
E0-BNE2A-MA		23.4 m Teflon	222.20
E0-BNE2B-MB		70.2 m PVC	322.20
E0-BNE2A-MB		70.2 m Teflon	610.00
E0-BNE2B-MC		117.0 m PVC	448.50
E0-BNE2A-MC		117.0 m Teflon	953.60
E0-BNE2B-ME	D	500.0 m PVC	1751.00

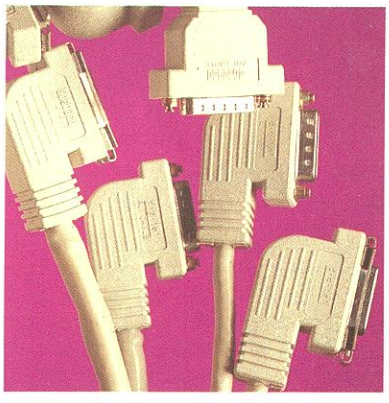
Ethernet Transceiver Cables

Connects controller to transceiver or DELNI

The Ethernet Transceiver cable connects your system's Ethernet controller to the Ethernet Transceiver H4005 or DELNI. Like the coaxial cable, the transceiver cable is available in both PVC and Teflon insulated versions.

These cables are fully IEEE 802.3 compliant for use with the H4005 Ethernet transceiver.

Digital's BNE3 and BNE4 cables for H4005 transceivers are eight conductor, 15-pin connectors, in a straight or right-angle design.



Part No.	*Description*	*Price £*
Straight Connectors		
E0-BNE4C-02	2 m PVC (office cable)	33.80
E0-BNE4C-05	5 m PVC	39.30
E0-BNE3H-05	5 m PVC	43.50
E0-BNE3L-05	5 m Teflon	67.60
E0-BNE3H-10	10 m PVC	58.00
E0-BNE3L-10	10 m Teflon	104.20
E0-BNE3H-20	20 m PVC	79.40
E0-BNE3L-20	20 m Teflon	175.30
E0-BNE3H-40	40 m PVC	132.50
E0-BNE3L-40	40 m Teflon	318.10
Right-angle Connectors		
E0-BNE4D-02	2 m PVC (office cable)	35.20
E0-BNE4D-05	5 m PVC	41.40
E0-BNE3K-05	5 m PVC	43.50
E0-BNE3M-05	5 m Teflon	68.30
E0-BNE3K-10	10 m PVC	58.00
E0-BNE3M-10	10 m Teflon	106.30
E0-BNE3K-20	20 m PVC	79.40
E0-BNE3M-20	20 m Teflon	177.30
E0-BNE3K-40	40 m PVC	134.50
E0-BNE3M-40	40 m Teflon	320.20

DECconnect Cable

Ethernet Over Twisted Pair

A bigger choice for complete office cabling

Digital now provides 802.3/Ethernet capability over a wider range of media choices. Whilst ThinWire coaxial cable was optimised for Ethernet, recent technology has allowed 802.3/Ethernet to run over both Unshielded Twisted Pair Cable (common telephone wire) and Shielded Twisted Pair (IBM cabling system).

Ethernet Over Shielded Twisted Pair

Integrate into existing twisted pair cabling

Digital's 802.3/Ethernet adapters for IBM shielded twisted pair, support connections of PCs and Workstations over IBM STP cabling to 802.3/Ethernet LANs at a full 10 Mb/s. The product consists of adapters for converting ThinWire to IBM shielded twisted pair at the SER Room, and back to ThinWire at the office end to connect to the PC/Workstation. This takes advantage of the Digital 802.3/Ethernet technology whilst protecting your investment in installed IBM cabling.

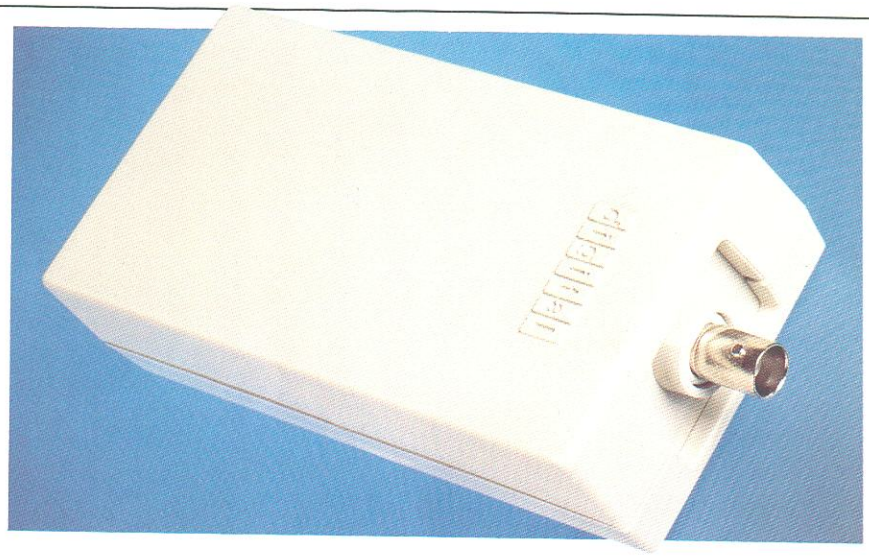
Adapters for Shielded Twisted Pair are capable of supporting up to four PCs or Workstations, in any combination, daisy chained on Shielded Twisted Pair Cable. Call Technical Support for more information.

Ethernet Over Unshielded Twisted Pair

The Unshielded Twisted Pair (UTP) Ethernet products

Digital's Unshielded Twisted Pair Ethernet adapters are ideal for use in a facility where you already have twisted pair cabling in place, and rewiring with ThinWire is not feasible or desirable.

Extends high speed Ethernet services to a user desk over the most common telephone wiring system, at the full 10 Mb/s speed.

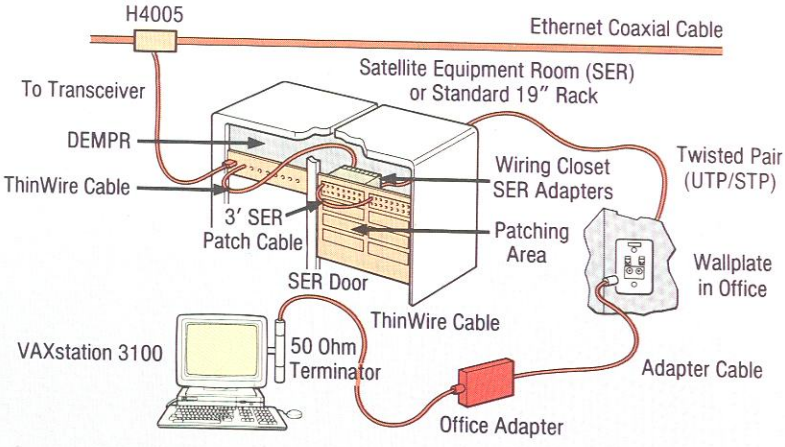


Office adapters for Unshielded Twisted Pair can support only 1 PC or 1 Workstation on each cable segment.

Each UTP segment can be up to 70 metres long from SER to PC/Workstation.

It is recommended that all existing UTP cabling be tested for suitability for 802.3/Ethernet before installation of any 802.3 products.

Ethernet Over Shielded/Unshielded Twisted Pair



Part No.	*Description*	*Price £*
H3301-AA	IBM Shielded Twisted Pair Adapter Kits Complete Starter Kit for 8 Connectors	1380.00
H3311-AA	Office Adapter 8 Pack	517.50
H3331-AA	SER Adapter 8 Pack	517.50
H3300-AA	UTP 8 Line Starter Kit	1104.00
H3310-AA	UTP 8 Office Adapters	270.50
H3330-AA	UTP 4 Dual Line SER Adapters	414.00
E0-H8226	UTP Solid Wire MMP 50 Pack	22.10
BS10C-01	1 m Conversion Cable IBM STP to DEC ThinWire	103.50
BS10D-03	3 m Conversion Cable IBM STP to DEC ThinWire	138.00
BS16Q-03	SER Patching MMP 3 ft Cables 8 Pack	103.50
BS16R-02	Office Patching MMP 2 ft Cables 8 Pack	103.50
E0-BS16K-08	ThinWire SER Patch Cables 8 Pack	60.00

Call Technical Support for configuration guidelines

ThinWire Ethernet Cables

Perfect for office use

Thinner and more flexible than standard Ethernet coaxial cable, these are ideal for office installations where cable has to run along walls and through partitions. ThinWire networks are more economical, easier to install and support full 10 Mb/s. Available in selected lengths with male BNC connectors at each end or in unterminated 305 m spools.

Part No.	*Description*	*Price £*
E0-BC16M-06	1.8 m PVC	9.00
E0-BC16M-15	4.6 m PVC	10.40
E0-BC16M-30	9.2 m PVC	14.50
E0-H8243-A	305.0 m PVC	138.00
H8244-A	305.0 m Teflon	655.50

'N' Type Coaxial Terminator and Barrel Connectors

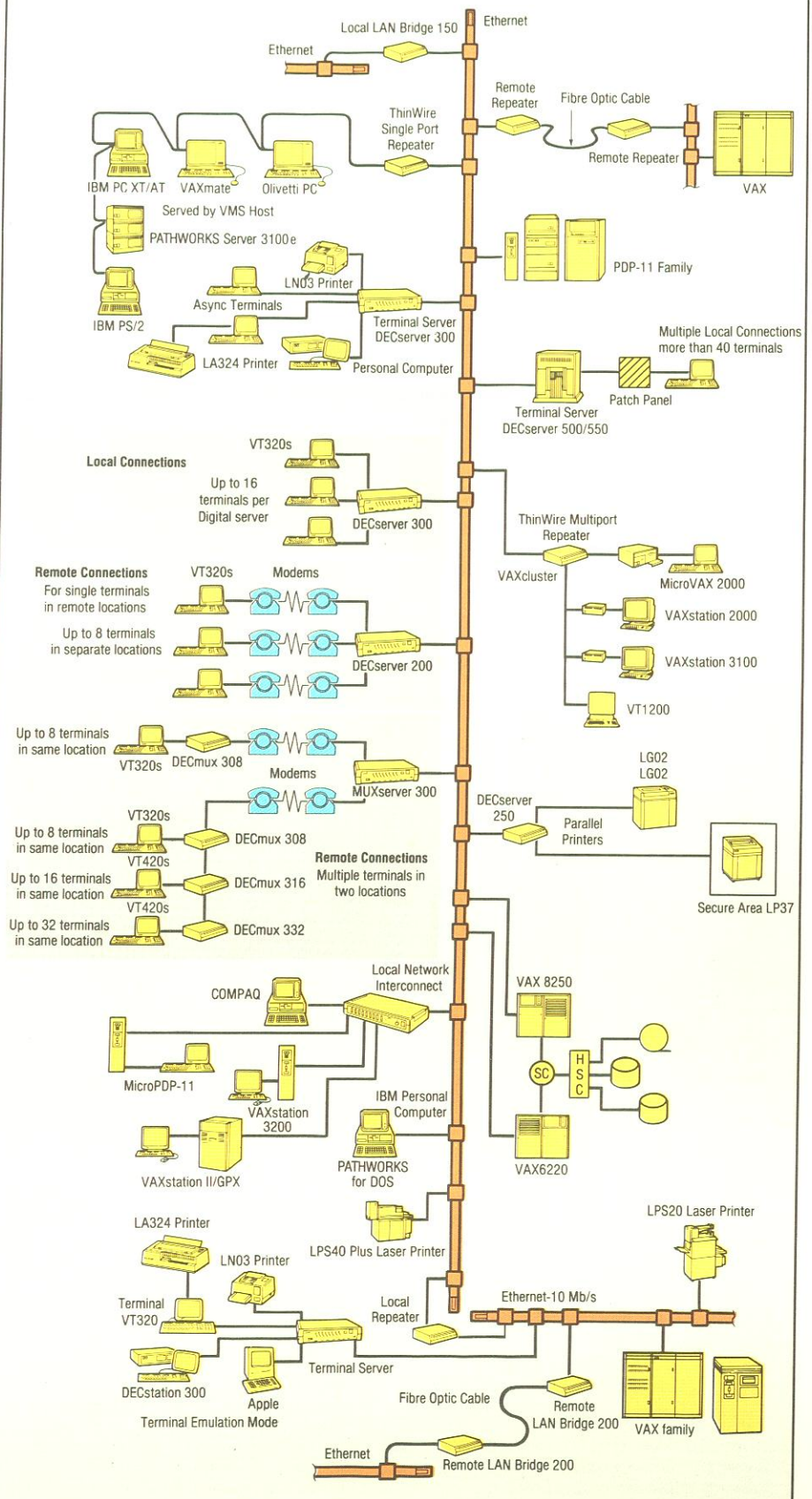
For simple terminating or joining of Ethernet cables

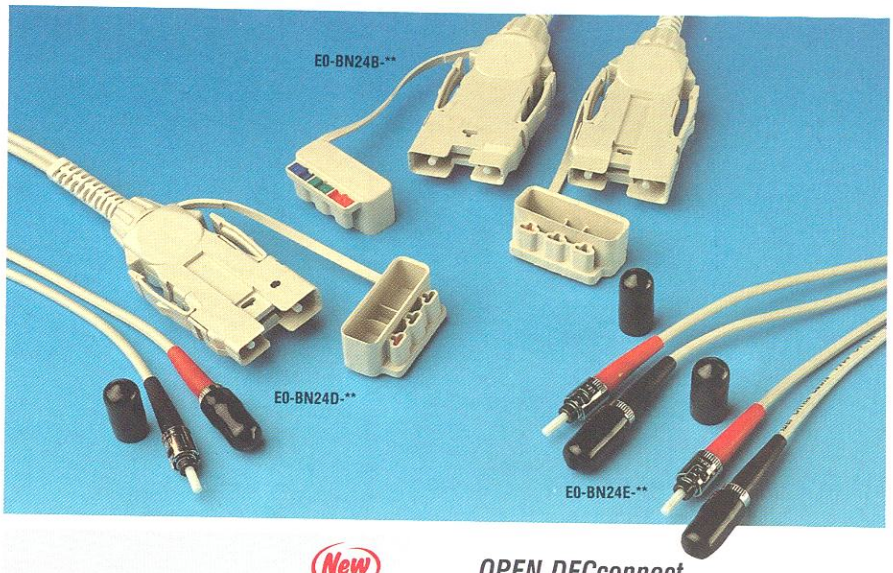
The 12-19816-01 terminator provides the correct termination for Ethernet cables. This prevents standing waves and undesirable reflections from disrupting the network. A terminator is required at each end of the Ethernet cable.

The 12-19817-01 barrel connector is used to connect two or more Ethernet coaxial cable lengths together to form a continuous network segment.

Part No.	*Description*	*Price £*
12-19816-01	Terminator Assembly	15.20
12-19817-01	Barrel Connector	8.30

Ethernet Standard and ThinWire Configuration Guide





New

OPEN DECconnect

Digital's new multivendor cabling system

OPEN DECconnect is Digital's new, standards based structured cabling system.

The new system is fully compliant with EIA/TIA 568 the emerging international commercial wiring standard. It is also multivendor, and can consequently support most other vendor networking hardware.

Being non-proprietary, the OPEN DECconnect is based on standard, commercially available components and is also application independent. OPEN DECconnect supports applications such as FDDI, Ethernet, EIA423 and 232, and ISDN.

A complete system with the very latest technology

The OPEN DECconnect architecture incorporates the five subsystems of a wiring system: campus backbone, building backbone, horizontal wiring, work area wiring and administration.

The new Digital wiring system uses the latest cabling technologies incorporating both fibre optic – for high speed data transfer over long distances – and Unshielded Twisted Pair for medium and low speed data over shorter distances.

Fibre optic cabling is used for campus and building backbones, and also for horizontal connections to the desk in high speed applications such as workstations. Unshielded Twisted Pair (UTP) cabling is used in the horizontal work area subsystems, and the associated administration subsystem.

OPEN DECconnect also supports Thinwire as an important wiring system suited to many special applications.

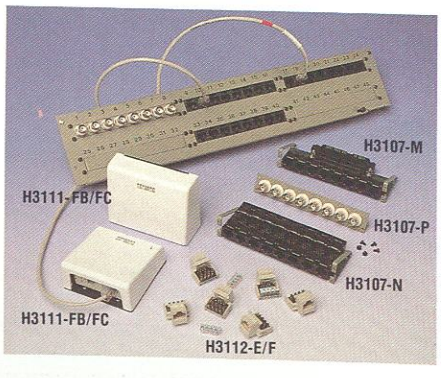
OPEN DECconnect UTP Subsystem

OPEN DECconnect UTP is based on 4 pair Unshielded Twisted Pair cable, and the standard 8 pin modular jack (RJ45 type) and plug. The building cabling is 4 pair UTP, and all eight wires are connected through end-to-end.

Features

- Building cable, 4 pair 100 Ohm unshielded Twisted Pair data cable, 24 AWG solid copper, PVC or teflon
- Modular patch panel, and inserts. The patch panel frame mounts in a 19" rack, and supports up to 6 inserts, allowing as many as 48 patching points. There are currently five different inserts to support various servers and patching configurations
- The connectors for office wallplates are 8 pin ISO 8877 RJ45 type modular jacks (MJs). They are exactly the same size as the existing MMJ, so will fit any wallplate which supports the existing MMJ
- Equipment cables for connecting servers, repeaters, controllers, for example, to a patch panel insert
- Office cables for connecting an office terminal or workstation to a faceplate MJ
- Patch cable, for implementing full patching
- Documentation, consisting of a product catalogue and an applications guide

Note: some of the cables are used in more than one application, like the patch cable is also the 10BaseT and ISDN equipment cable



Applications of UTP OPEN DECconnect

OPEN DECconnect UTP is designed to be Digital's cabling solution in accordance with the EIA/TIA 568 commercial building wiring standard. OPEN DECconnect has been engineered to satisfy most common networking requirements and has been tested at data rates up to 20 Mhz. It can support a variety of data transfer speeds and protocols – ie the same OPEN DECconnect cabling can run different applications. For example, it is possible to patch DEC423 to one office outlet, and 10BaseT to another outlet. Both applications will run, by running over exactly the same type of UTP cable, possibly through the same patch panel insert to the same type of office outlet.

Horizontal Cable Distance

In accordance with the EIA standard, OPEN DECconnect UTP can be used in cable runs of up to 90 m from wall outlet to patch panel. A further 3 m office cable and 6 m equipment cable is permitted.

Building Cabling

OPEN DECconnect 4 UTP building wiring, typically runs from the office outlets to patch panels mounted in a SER. At the office end, the UTP building wiring is terminated on barrel punchdowns in the office MJs, and at the SER, on 110 punchdowns on the rear of the patch panel. The connectors in the patch panel and the office are configured according to ISO 8877.

Patching

OPEN DECconnect patching hardware consists of a 19" mounted 2U high H3108-BA patch frame, which supports up to six inserts. Each insert has eight 8 pin MJs on the front, with different terminations on the rear, as outlined in the previous section. The H3107-L termination insert has the 110 punchdowns for terminating the building wiring. Other inserts are available for different applications.

Office Outlets

Two types of office MJ are available, the H3112-E, with no icon, and the H3112-F with a double arrow data icon. they are otherwise identical, and they are the same size as the existing H3113-A MMJ. This means that existing wallplates (e.g. HK-H3111-03) that support the MMJ will also support the new OPEN DECconnect H3112-E or H3112-F modular jack.

To prevent premature failure of FDDI cable, the minimum bend radius should not be exceeded with fibre optic cable. Digital supplies the H3111-G* International Wallbox for connecting the FDDI insert (H3114-FE). This box also accepts the Dual ST insert (H3114-FF).

The fibre connector should lie along the wall, horizontally or vertically, to avoid light being able to enter a persons eye, and to minimise protrusion of the office cable.

Building Cable

Description	Application	Length/Part No. 305 m
4 pair 100 Ohm 24 AWG Solid UTP, PVC	Internal Networking Cable	E0-H8245-A
4 pair 100 Ohm 24 AWG Solid UTP, Teflon	Internal Networking Cable	H8246-A
ThinWire Cable, PVC	Internal Networking Cable	E0-H8243-A
ThinWire Cable, Teflon	Internal Networking Cable	H8244-A

Wallmount to Equipment Cables

Description	Application	Length/Part No. 1 m	3 m	10'	4 m	7 m
10BaseT Cable, 8 MP-8MP, 2 UTP Stranded	Patch Cable	–	BN24F-03	–	BN24F-04	–
ISDN 10BaseT Cable, 8MP-8MP 4 UTP Stranded pin-to-pin	Patch Cable	BN24G-01	BN24G-03	–	BN24G-04	BN24G-07
DEC423 Cable, 8MP-6MMP, 3 UTP Stranded	Terminal or printer to MMJ to MJ outlet	–	BN24H-03	–	BN24H-04	–
10BaseT, 8MP-6MMP	Connection to existing DECconnect	–	–	BC16U-10	–	–

Equipment to Equipment Cables

Description	Application	Length/Part No. 1 m	3 m	10'	4 m	7 m
DEC423 Cable, 8MP-6MMP, 3 UTP Stranded	DECserver 300 to Patch Panel	–	BN24J-03	–	–	–
DEC423 Cable, 36 pin to 50 pin Connectors	DECserver 200 or CXA16 to H3107-M	–	BN24K-03	–	–	–
DEC423 Cable, 8 x 6MP to 50 pin Connector, Octopus Cable	DECstation 300 to H3107-M	–	BN24L-03	–	–	–
10BaseT Cable, 8 x 8MP to 50 pin Connector, Octopus Cable	DETPR to H3107-M	–	BN24M-03	–	–	–
DEC423 Cable, 36 Connector to 8 x 8MP Octopus Cable	DECstation 200 or CXA16 to H3107-L or H3107-N	–	BN24N-03	–	–	–
ThinWire Cable, BNC to BNC	Network Cable	–	–	E0-BC16K-10	–	–

Description	Application	Cable Length/Part No. 1 m	3 m	4.5 m	10 m	20 m	30 m
Dual 2.5mm Bayonet ST-type Connector Patch Cables	Fibre Patch Cable	E0-BN24E-01	E0-BN24E-03	E0-BN24E-4E	E0-BN24E-10	E0-BN24E-20	E0-BN24E-30

FDDI

Description	Application	Cable Length/Part No. 1 m	3 m	4.5 m	10 m	20 m	30 m
ST-type Connector Patch Cable	FDDI to 2.5 mm bayonet	E0-BN24D-01	E0-BN24D-03	E0-BN24D-4E	E0-BN24D-10	E0-BN24D-20	E0-BN24D-30
FDDI to FDDI Patch Cable	FDDI Crossover Wiring	E0-BN24B-01	E0-BN24B-03	E0-BN24B-4E	E0-BN24B-10	E0-BN24B-20	E0-BN24B-30

Connectors

Description	Application	Part No.
Modular Patch Panel Frame 19" x 2U (Includes brackets for flush or recessed mount)	Mounts up to 6 patch panel inserts, supports up to 48 patch points	H3108-BA
10 Blank Inserts	Covers unused patch panel locations	H3108-CA
Termination Insert, 8 x 8MJ to 110 Punchdown Block	Connection to servers, provides direct server patching	H3107-L
Telco Connector Insert, 8 x 8MJ to 50 pin Connector	Connection to servers, provides full patching via H3107-L	H3107-M
Coupler Insert, 8 x 8MJ – 8 x 8MJ Back to Back	Provides full patching via the H3107-L	H3107-N
Thinwire Insert, 8 x Female BNC	Terminates ThinWire building cable, provides direct Server patching	H3107-P
8 pin snap-in MJ, no Icon, ISO 8877 pin/pair, qty 8	Terminates building cabling in work area. Mounts in any faceplate which supports the MMJ	H3112-E
8 pin snap-in MJ, with Data Icon, ISO 8877 pin/pair, qty 8	Terminates building cabling in work area. Mounts in any faceplate which supports the MMJ	H3112-F
8 Wallboxes, White (-EB) Ivory (-EC)	Supports all Digital snap-in office connectors for copper cabling – except Daisychain	E0-H3111-EB/EC
8 Wallboxes, White (-FB) Ivory (-FC)	Supports all Digital snap-in office connectors for copper cabling	E0-H3111-FB/FC
8 International Wallboxes, White (-GB) Ivory (-GC) Digital Grey (-GA)	Supports all Digital snap-in connectors, fibre and copper cabling	H3111-GA/GB/GC

Tools

Description	Part No.
110 Punchdown Tool	H8100-C
Small Barrel Punchdown Tool, for MJ and MMJ (Part of existing H8242 tool kit)	H8100-D
BNC Crimp and Die (Also part of H8242)	H8100-E

OPEN DECconnect Documentation

The following helpful information is available to order from Digital Assisted Services

Description	Part No.
OPEN DECconnect Systems Guide	EC-H0631-42
Network Wiring and Application Guide	EB-K2411-42
OPEN DECconnect Feature Sheet	EC-F0862-42/90
10BaseT Feature Sheet	EC-F0861-42/90

Part No.	Price £	Part No.	Price £	Part No.	Price £	Part No.	Price £
BC16U-10	10.40	E0-BC16K-10	10.40	E0-BN24E-03	93.80	E0-H3111-EC	31.70
BN24F-03	5.50	E0-BN24B-01	125.60	E0-BN24E-4E	97.30	E0-H3111-FB	41.40
BN24F-04	6.90	E0-BN24B-03	131.10	E0-BN24E-10	110.40	E0-H3111-FC	41.40
BN24G-01	4.10	E0-BN24B-4E	135.90	E0-BN24E-20	134.50	H3112-E	22.10
BN24G-03	5.50	E0-BN24B-10	153.90	E0-BN24E-30	158.70	H3112-F	22.10
BN24G-04	6.90	E0-BN24B-20	184.90	E0-H8243-A	138.00	H3111-GA	62.10
BN24G-07	17.30	E0-BN24B-30	216.70	E0-H8245-A	124.20	H3111-GB	62.10
BN24H-03	5.50	E0-BN24D-01	102.10	H3107-L	26.90	H3111-GC	62.10
BN24H-04	6.90	E0-BN24D-03	108.30	H3107-M	26.90	H8100-C	86.30
BN24J-03	5.50	E0-BN24D-4E	112.50	H3107-N	26.90	H8100-D	13.80
BN24K-03	48.30	E0-BN24D-10	122.10	H3107-P	31.10	H8100-E	69.00
BN24L-03	62.10	E0-BN24D-20	150.40	H3108-BA	31.10	H8244-A	655.50
BN24M-03	62.10	E0-BN24D-30	176.00	H3108-CA	16.60		
BN24N-03	62.10	E0-BN24E-01	89.70	E0-H3111-EB	31.70		

Open DECconnect Faceplate

Uses Standard Mounting Boxes for Ease of Installation

Three complementary styles of faceplates are now available to provide terminal and ThinWire Ethernet distributed connections around your building.

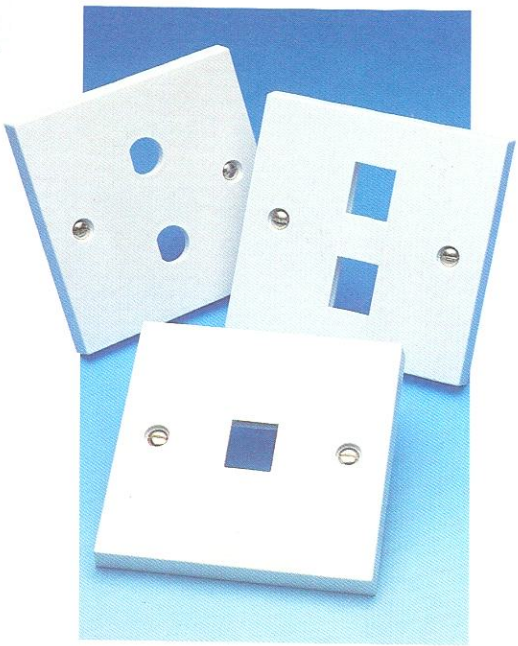
The range has now been expanded to include a single MMJ outlet in addition to the existing dual MMJ and BNC faceplates.

The faceplates have been designed to be used with standard UK electrical surface or recessed mounting boxes, providing a flexible and complementary solution to your wiring requirements.

The UK-H3111-03 will accept a single snap-in MMJ jack (type H3113-A) for DEC423 connections.

The UK-H3111-01 will accept two snap-on MMJ jacks (type H3113-A) for DEC423 connections.

The UK-H3111-02 will accept two standard nut fixing BNC sockets for ThinWire Ethernet distribution. Socket connections are linked using BC16K-02 cables.



Faceplates are supplied in boxed quantities of 10 and are plain white in colour complete with two mounting screws for attachment to the mounting box.

Installation and mounting instructions are provided in each box.

See page 60 for details of suitable connectors.

Part No.	*Description*	*Price £*
UK-H3111-03	10 × Single MMJ Faceplate	32.50
UK-H3111-01	10 × Double MMJ Faceplate	32.50
UK-H3111-02	10 × Double BNC Faceplate	32.50

BNC Cable Interconnection Products

Cable runs and connectors

Both ThinWire Ethernet and terminal interconnection cables are available in unterminated 305 metre spools.

ThinWire connectors are used to connect sections of ThinWire Ethernet and to provide the termination needed.

The DEC423 standard cable is the DEC OFFICE Cable (E0-BC16E) an unshielded 6-conductor flat cable which is terminated with a Modified Modular Plug (MMP).

E0-H3114

E0-H3114 is a single nut fixing BNC socket for mounting in a faceplate or patch panel.

E0-H8222

E0-H8222 is a BNC plug for ThinWire Ethernet. A ThinWire installation kit (H8242) is required to attach the plug to the cable. Note: this kit is reusable.

Part No.	*Description*	*Price £*
H8242	ThinWire Installation Kit used for installing E0-H8243-A and H8244-A	276.00
E0-H8243-A	ThinWire Cable PVC 305 m Spool	138.00
H8244-A	ThinWire Cable Teflon 305 m Spool	655.50
E0-H8222	ThinWire Ethernet Cable Coaxial Connector	1.40
E0-H8223-00	ThinWire Ethernet T Connector	8.30
E0-H8224-00	ThinWire Ethernet Barrel Connector	6.20
E0-H8225-00	ThinWire Ethernet Terminator	5.50
E0-H3114	BNC Socket (Box of 8)	13.80

Satellite Equipment Room Products

Patch blocks, cabling, racking, plugs and sockets

The satellite equipment rack (H3130-CB) provides the racking necessary to mount the patch panels and construct the Satellite Equipment Room (SER).

(Please note that this product is not currently supplied from stock).

Two patch panels are available for use in the SER. The E0-H3107-A patch panel is used to connect twisted pair cable to cable concentrator for low speed communications. The H3107-B patch panel is used to connect the ThinWire Ethernet cable to the DEMPR for high speed communications. Both types of patch panel support sixteen connections.

Two cable kits are available for use in SER, the H3117 Terminal Interconnection SER Cable Kit and the H3118 ThinWire SER Cable Kit.

E0-H3107-A

The E0-H3107-A patch panel is a 16 user patch that consists of the following subcomponents:

- 1 Modified Modular Jack Panel
- 1 Mounting Panel for two E0-H3104-B Cable Connectors
- 16 H3113-B Modified Modular Jacks
- Number Sheets, Miscellaneous Hardware

H3107-B

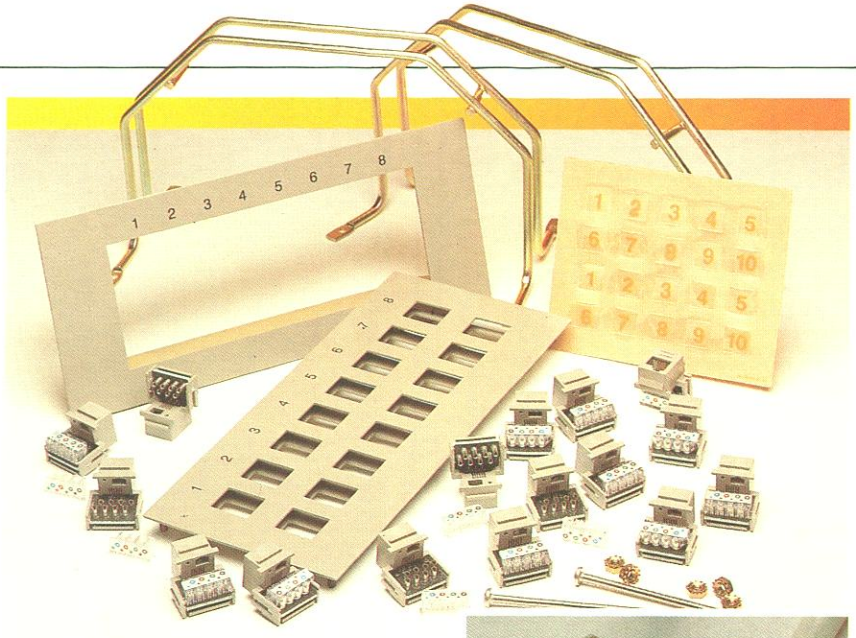
The H3107-B patch panel is a 16 user patch block that consists of the following subcomponents:

- 2 BNC Panels
- 16 BNC Panel Jacks
- 16 BNC Insulators
- Miscellaneous Hardware

H3117

The H3117 cable kit is a 16 user kit that consists of the following subcomponents:

- 16 E0-BC16E-02 Terminal Interconnection Cables



H3118

The H3118 cable kit is a 16 user kit that consists of the following subcomponents:

- 16 BC16K-02 ThinWire Cables
- 16 BC16P-10 ThinWire Cables

E0-H3104-B

The E0-H3104-B is a cable kit for connecting DECmux 300 (DEC423 variant) to a 8 MMJ socket harmonica box. It consists of a BC16C-10 cable and H3104 harmonica box.

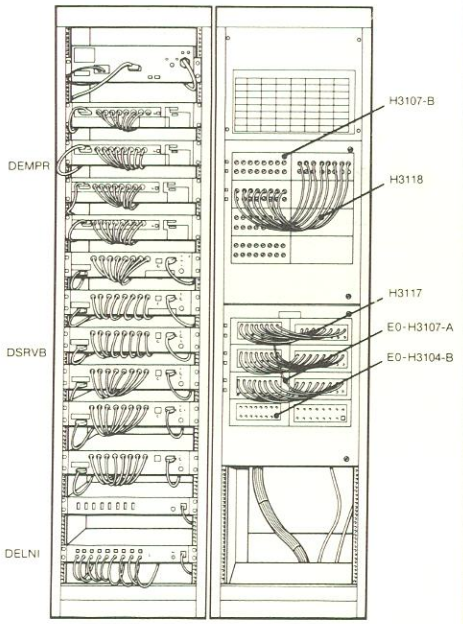
Overview

DECconnect Communications Systems

DECconnect complements Digital's networking strategy, by providing a comprehensive range of products for wiring Ethernet based networks.

With DECconnect we can offer capabilities such as pre-wiring a new building for a network of terminals, PCs, workstations and departmental systems; or in adding to or re-arranging an existing network without rewiring.

Contact us Now



Part No.	*Description*	*Price £*
E0-H3107-A	DECconnect Terminal Cable Patch Block	89.70
H3107-B	DECconnect ThinWire Patch Block	56.60
E0-H3113-B	Modified Modular Jacks used in H3107-A	22.10
H3117	16 user Terminal Patch Cord Kit	44.20
H3118	16 user ThinWire Patch Cord Kit	148.40
E0-H3104-B	Cable Kit	41.40

MMJ Cable Interconnection Products

Everything you need for your DECconnect system

Terminal interconnection components are the cables, connectors and adapters used to link terminals, terminal servers, and computer hosts within the DECconnect System.

The Modified Modular Plug (MMP) is the DEC423 standard connector and to connect MMPs into existing terminals and printers, passive physical adapters are required. Passive adapters allow both RS232 and DEC423 signalling to pass through, however when DEC423 devices are attached to RS232 wiring they are limited to RS232 signalling.

DEC423 also offers an Active Convertor (H3105-B) which transforms the signal from an RS232 interface to the signal for a DEC423 interface, thus allowing full DEC423 implementation.

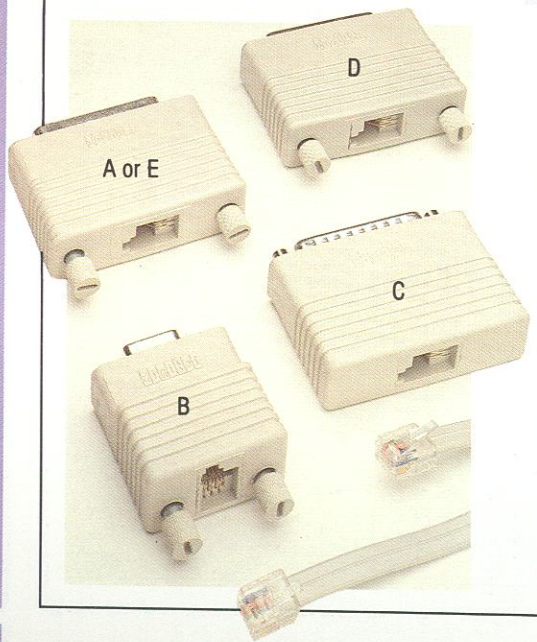
A 6-conductor Cable Extender (E0-H8572-00) is available to extend the length of two MMP Pre-terminated cables.

E0-H3113-A

E0-H3113-A is a snap-in 6 pin MMJ socket for use in a faceplate.

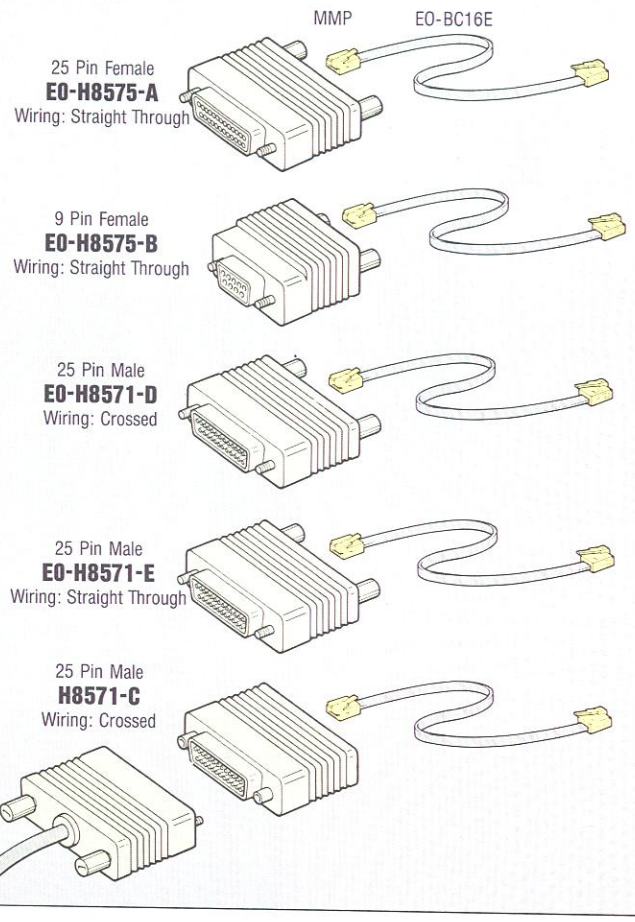
E0-H3113-B

E0-H3113-B is a snap-in 6 pin MMJ socket for use in a SER.



Passive Adapters Configuration Guide

Passive adapters are used to connect MMJ/MMP type cables to D-type connectors

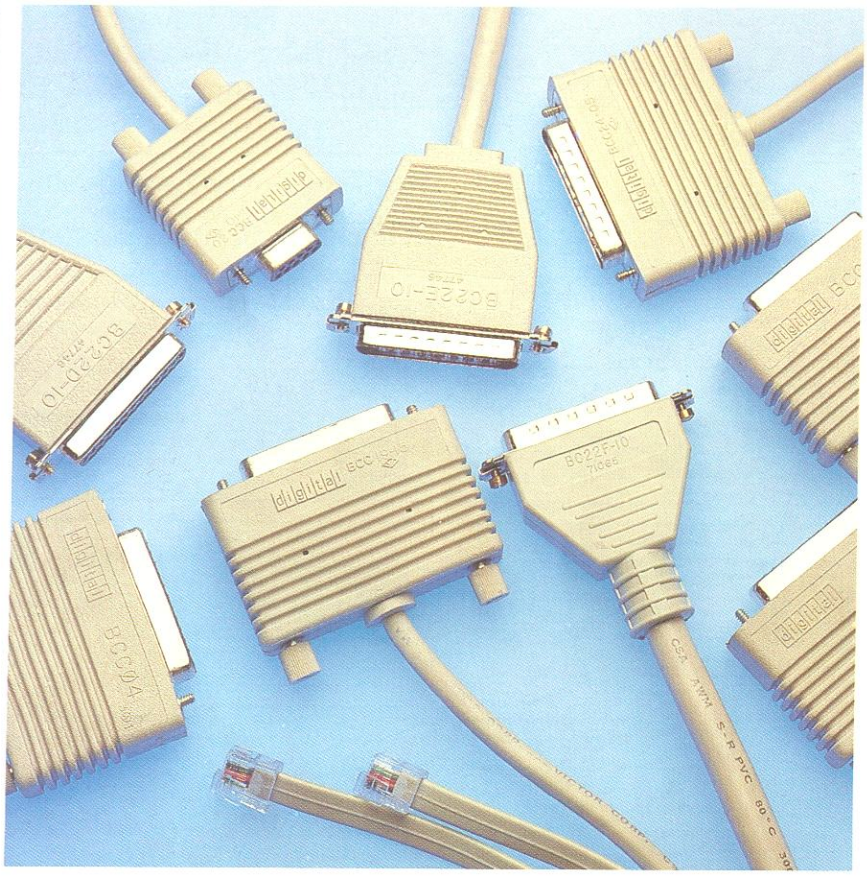


RS232 to DEC423 Adapters

A Guide to Use

A range of adapters is available to suit the Digital range of cables allowing RS232/DEC423 connection. Simply refer to the chart for the correct adapter part number.

Part No.	*Description*	*Price £*
E0-H8241	Crimp Tool for terminating H8240 Cable	120.70
E0-H8240	DEC423 Office Cable 305 m Unterminated	112.50
E0-H8245-A	DECconnect Building Cable, PVC 305 m Spool	124.20
H8246-A	DECconnect Building Cable, Teflon 305 m Spool	282.90
H3105-B	Active Convertor (240V)	103.50
E0-H8220-00	Modified Modular Plugs (Pack of 50)	22.80
E0-H8575-A	25 (female) Pin Passive Adapter	15.90
E0-H8575-AL	**Bulk Pack** 16 × E0-H8575-A – **save 6%**	238.70
E0-H8575-B	9 Pin (female) Passive Adapter	17.30
H8571-C	25 Pin (male) Passive Adapter	13.80
E0-H8571-D	25 Pin (male) Filtered Passive Adapter	18.60
E0-H8571-DL	**Bulk Pack** 16 × E0-H8571-D – **save 4%**	284.30
E0-H8571-E	Passive Adapter, Printer	21.40
E0-H3113-A	6 Pin MMJ Socket for Faceplate	22.10
E0-H3113-B	6 Pin MMJ Socket for SER	22.10
E0-H8572-00	6-Conductor Cable Extender	4.80



Terminal Cable Interconnection Products

Approved Cable

All Digital cables are thoroughly inspected and tested so you can be sure of the utmost safety and reliability. They are available in a wide variety of lengths enabling you to choose the exact cable to suit your particular application. Durable enough to operate efficiently in the toughest environments, every cable is equipped with strain reliefs, proper earth and drain wires and earth shields to reduce cross talk.

Part No.	Description	Price £
E0-BC22D-10	10 ft CCITT V24/V28 6 Wire Null Modem Extension Cable	16.60
E0-BC22D-25	25 ft CCITT V24/V28 6 Wire Null Modem Extension Cable	20.70
E0-BC22D-50	50 ft CCITT V24/V28 6 Wire Null Modem Extension Cable	27.60
E0-BC22E-10	10 ft CCITT V24/V28 16 Wire Modem Extension Cable	25.50
E0-BC22E-25	25 ft CCITT V24/V28 16 Wire Modem Extension Cable	33.80
E0-BC22E-50	50 ft CCITT V24/V28 16 Wire Modem Extension Cable	49.70
E0-BC22F-10	10 ft CCITT V24/V28 25 Wire Modem Extension Cable	33.10
E0-BC22F-25	25 ft CCITT V24/V28 25 Wire Modem Extension Cable	44.20
E0-BC22F-50	50 ft CCITT V24/V28 25 Wire Modem Extension Cable	65.60
E0-BCC04-25	25 ft CCITT V24/V28 PC300 Modem Cable	37.30
E0-BCC04-50	50 ft CCITT V24/V28 PC300 Modem Cable	51.70
E0-BCC05-10	10 ft Printer Cable (9 Pin to 25 Pin)	17.90
E0-BCC05-25	25 ft Printer Cable (9 Pin to 25 Pin)	24.80
E0-BCC05-50	50 ft Printer Cable (9 Pin to 25 Pin)	30.40
E0-BCC14-10	10 ft CCITT Modem Extension Cable	22.80
E0-BC16E-10	10 ft Conductor Cable	2.80
E0-BC16E-25	25 ft Conductor Cable	4.80
E0-BC16E-50	50 ft Conductor Cable	8.30

Serial Interface and Crossover Switches

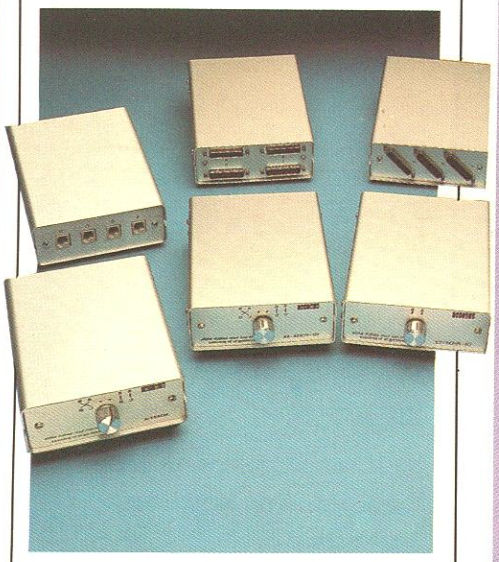
Makes complete use of your system's resources and eliminates unnecessary and unsightly cables

Two serial interface switches are available, the E0-LQPX2-SW connects one system to two printers (two female/one male connector), and the E0-PCXXF-CZ connects two systems to one printer (one female/two male connectors).

Crossover switches give you even more flexibility. They can accommodate two personal computers and two printers, so you can, for example change between a letter quality and draft printer, and are available with RS232 or DEC423 connectors.

See overleaf for configuration details.

Please note: These switches are only suitable for EIA applications only.



Part No.	Description	Price £
E0-LQPX2-SW	Serial Interface Switch	151.00
E0-PCXXF-CZ	Serial Interface Switch	151.00
E0-PCXXA-AA	Crossover Switch	169.90
E0-H0401-A	Crossover Switch	123.10

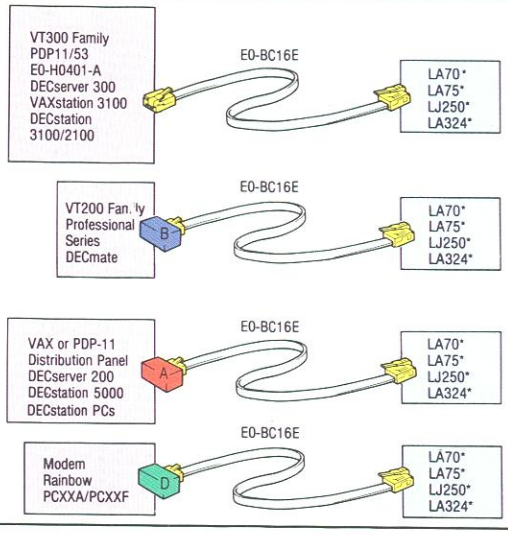
Configurations for Printers using MMJ (DEC423) Connectors

Adapters shown as:

A E0-H8575-A

B E0-H8575-B

D E0-H8571-D



*Printers are supplied with a 10' E0-BC16E cable.

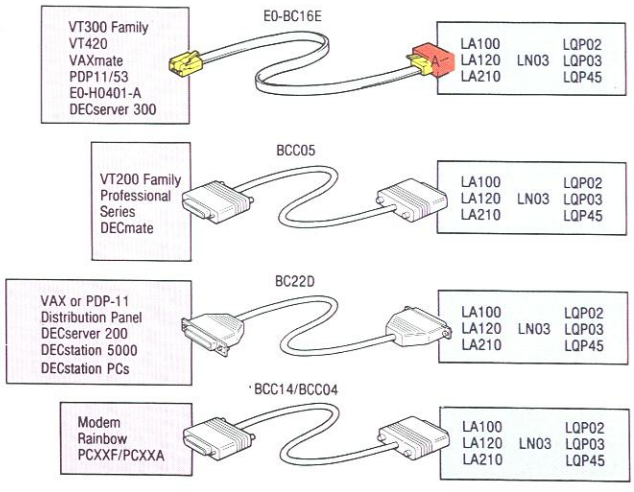
Configurations for Printers with RS232 Connectors

Adapter shown as:

A E0-H8575-A

BCC04/BCC14 cables

The BCC14 cable is 10 feet in length. If you require a longer cable, the BCC04 is available in 25 and 50 feet lengths.



For Terminals with DEC423/RS232 Connectors

Note: Adapters for customer installed wall sockets can be either E0-H8575-A or E0-H8571-D depending on trunk wiring. ANSI (DEC) standards dictate the following:

a. DTE uses 25 pin male connection

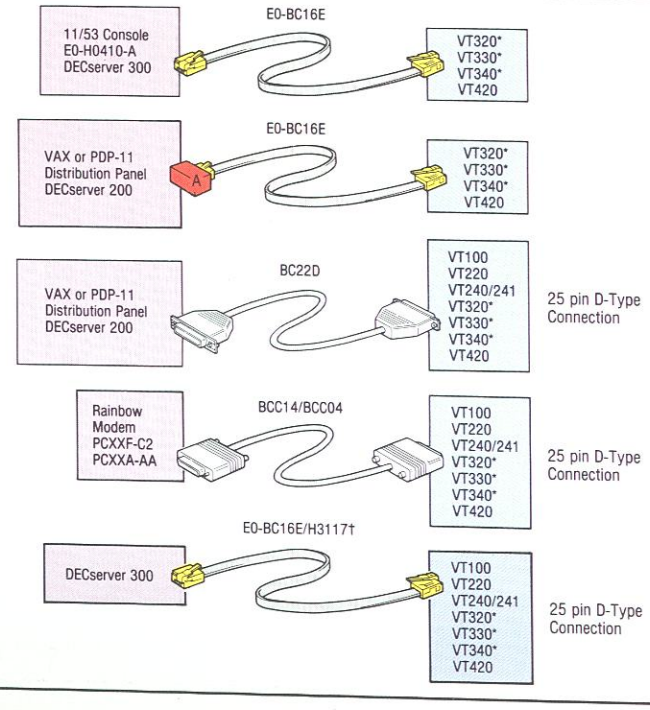
b. DCE uses 25 pin female socket

Adapter shown as:

A E0-H8575-A

BCC04/BCC14 Cables

The BCC14 cable is 10 feet in length. If you require a longer cable, the BCC04 is available in 25 and 50 feet lengths.



* VT300 series terminals have both a 25 pin D-Type plug and an MMJ connector on channel A. Channel B uses an MMJ connector only.

† When connecting DECserver 300 to existing RS232 cabling use one H3117 (16 user terminal patch cord kit) for each DECserver 300 and one H8571-C adapter per cable.

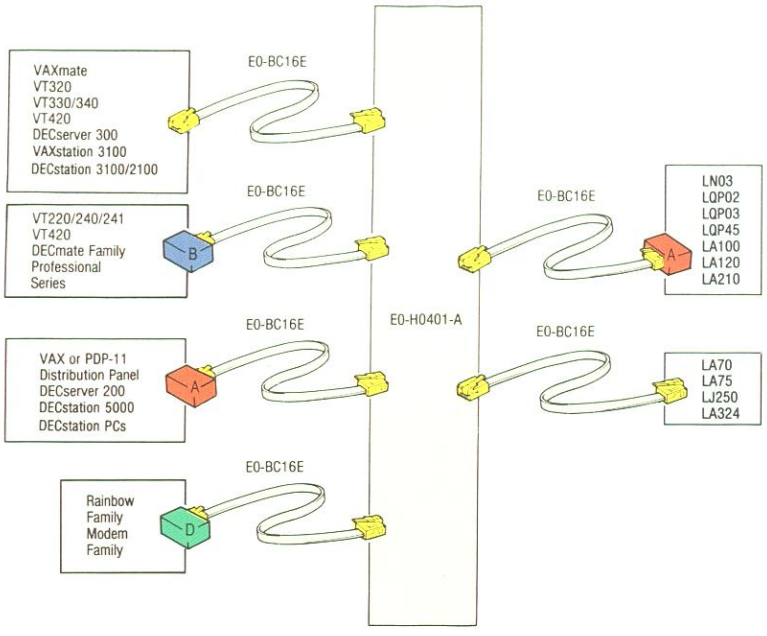
Serial Interface and Crossover Switch Cable Configurators with DEC423 Connectors

The switch E0-H0401-A is used to connect peripherals using the DEC423 type connectors.

Alternatively adapters can be used as illustrated where printers and terminals are not compatible.

Adapters shown as:

- A E0-H8575-A
- B E0-H8575-B
- D E0-H8571-D



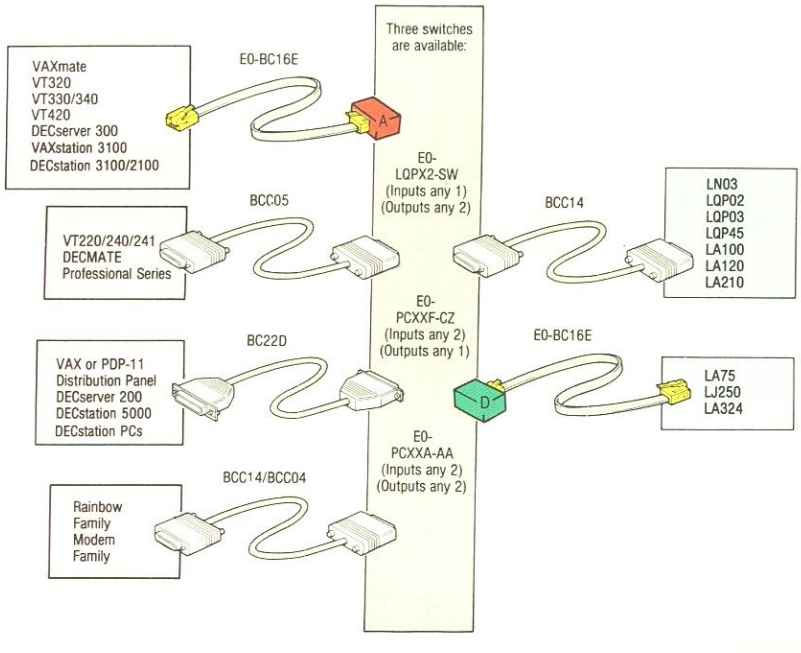
Serial Interface and Crossover Switch Cable Configurators with RS232 Connectors

Three switches are available for connecting peripherals using the RS232 type of connectors. Printers and terminals with DEC423 connectors can be used with these switches by using adapters, as illustrated.

Switch E0-LQPX2-SW connects one input and two outputs, E0-PCXXF-CZ two inputs and one output and E0-PCXXA-AA two inputs and two outputs.

Adapters shown as:

- A E0-H8575-A
- D E0-H8571-D



BCC04/BCC14 cables

The BCC14 cable is 10 feet in length. If you require a longer cable, the BCC04 is available in 25 and 50 feet lengths.

Section Index

69	Sessions Support Utilities
65	Video Terminal Selection Guide
68/69	VT330 Video Terminal
68/69	VT340 Video Terminal
66/67	VT420 Video Terminal
66/67	VT1200 Video Terminal
72	VT1300 Video Terminal

Viewpoint

Digital's commitment to extend its X Window Terminal technology, sees the introduction of the VT1300 Colour X Windows Terminal into this edition of the catalogue.

The VT1300 is Digital's new high performance colour X Windows Terminal, giving you access to colour text and graphics applications.

It supports the DECwindows and X Window Systems user interfaces, and gives you access to thousands of applications perviously only available with a workstation. More than 6,000 VMS and over 1,000 ULTRIX applications can be accessed as well as UNIX.

As with all Digital's X Window Terminals, the VT1300 incorporates display features similar to those found in a workstation and uses the same graphics user interface as a workstation.

Your investment in the VT1300 is protected because it supports open standards such as the X Window System, TCP/IP, and DECnet. And with these network interfaces, you get access to systems running VMS, ULTRIX and UNIX operating systems on either Digital or non-Digital hosts.

The VT1300 comes configured with 8 Megabytes of memory as standard, and can be upgraded to a VAXstation 3100 Model 30 as your requirements develop.

The VT1300 extends your choice of X Windows Terminal solutions for your application requirements.

Yours sincerely

Sarah Feneck

Sarah Feneck
Merchandising Manager
Terminals and Printers

Video Terminals Selection Guide

A choice of five video terminals.

Check the applications and specification and see which best suits your business needs.

	VT420	VT330	VT340	VT1200	VT1200	VT1300
Screen Size	14″ flat anti-glare	14″ flat anti-glare	13″ convex anti-glare	15″	19″	19″
Resolution	800 pixels × 414 lines	800 pixels × 500 lines		1024 pixels × 864 lines	1280 pixels × 1024 lines	
Refresh Rate	70 Hz	60 Hz		72 Hz		66 Hz
Keyboard	LK401/LK402 Standard or Word Processing	LK201 Standard or Word Processing		LK401/LK402 Standard or or Word Processing		LK201 Standard
Mouse	N/A	Optional		Standard		
X Windows Capability	N/A			Standard		
Dual Session	Yes with optional session support utility			Yes – multiple sessions available		
Graphics	N/A	ReGIS, SIXEL + TEK 4010/14		DECwindows OSF/ Motif Interfaces		
Applications	Monochrome dual session text	Monochrome text and graphics	Colour text and graphics	Monochrome multiple X Windows sessions		Colour Multiple X Windows sessions
Communications Ports	DEC423 and RS232			LAT, TCP/IP, Ethernet (BNC) and DEC423		DECnet, TCP/IP, Ethernet (BNC and AUI)
Printer Ports	DEC423*	DEC423				
Local Memory	Up to six pages of local memory	Up to two screens of local graphic memory		Up to 4 Mb		8 Mb
Page	66/67	68/69	68/69	70/71	70/71	72

* This DEC423 port can be configured as either a printer port or a 2nd data line for dual session

VT420 Video Terminals

Faster response times for high speed text processing

This latest video terminal from Digital, the VT420, introduces a new higher level of performance that will offer a real advantage to users needing a faster response for interactive text applications.

Single and dual session capability – increased productivity

The VT420 has the ability to support the Session Support Utility (SSU) protocol. This gives the capability of maintaining two simultaneous terminal sessions through a single communications port. Dual sessions are also supported by using two independent host communications ports. In this mode, the printer port is used as the second host communications port. Any of those available host communications are readily selectable through the Set-Up facility (see page 69).

The VT420 dual session capability offers a user selectable option of either flip-screen or horizontal split screen viewing of up to 48 lines in either mode. And with dual session capability, you are able to either interact and view multiple databases, or have two unrelated sessions active on your terminal. In split-screen viewing, two status lines keep you informed on your sessions.

The user interface for selecting sessions is similar for either of the dual session connections. Terminal context in each VT420 session, like Set-Up parameters and number of lines/pages, can be configured and maintained separately. Similarly, most Set-Up parameters may be saved independently. When using dual session, each session is allocated 256 bytes of volatile memory for programmable key usage.

A local copy/paste facility enables data to be copied within or between sessions, without any change to existing applications, improving your productivity and efficiency.

Features

- Dual session for improved efficiency – ideal for spreadsheets, database enquiries, word processing and other text applications
- Flip-screen or split screen viewing option
- Up to six pages of local memory
- Compatibility with VT320, VT220, VT100 and VT52
- 14″ flat face, anti-glare screen with 70 Hz flicker free display and full video overscan
- Improved vertical resolution – 410 pixels
- Choice of paper white, amber or green screens
- Low profile, new style keyboard, includes two alternative function keys and left and right compose keys
- Standard or word processing keyboard to suit your application
- Local copy/paste feature within and between sessions
- Removable pedestal with integral tilt/swivel base for maximum operator comfort
- Two status lines
- 24/25/36/48 Data line display
- New programmable functions include Rectangular Area Operations, Enhanced Scroll Regions, and 80/132 Column Change Control Data
- RS232 and DEC423 Interfaces

The right terminal for so many applications

Here is a terminal that is perfect for applications such as on-line transaction processing, spreadsheets, database enquiries, word processing and document preparation. In fact, any application requiring fast response times for high speed processing.

New improved viewing features

The VT420 offers a number of new features for improved viewing and user comfort; fully formed fonts for high quality text, an increased resolution and a 70 Hz screen refresh rate, giving exceptional screen quality and excellent legibility. And, full video overscan gives a crisp, clear presentation that is easy on the eyes.

Advanced ergonomics

New advanced ergonomics include a 14″ flat-face anti-glare screen with a choice of paper white, amber or green screen colours and a flicker-free display for improved working comfort. The new enclosure is both aesthetically pleasing and designed to be a pleasure to work with. All controls; on/off and separate contrast and brightness controls, are neatly positioned on the front of the terminal. The removable pedestal with tilt/swivel base makes it easy to position the terminal to any viewing angle.

The new style low-profile sculptured keyboard gives an improved feel and performance, and incorporates advanced switch technology and new and extended operating modes. These include: separate left and right alternate function, compose and shift keys, and LED indicators for lock and hold sessions. The F1 to F5 keys can be individually disabled or enabled locally, or from the host to prevent unintentional lock ups. You can also alter or disable local functions and allow applications to define new keyboard layouts to suit your own particular needs.

Local display memory

The VT420 features a large array of off-screen memory, configurable as a

single workspace or up to six 24-line pages (three per session). Now transaction processing applications can store forms locally for fast response times. New Rectangular Area commands, allow for better management of information on the display. Page memory can be used by an application to pre-store help pages etc. With a single keystroke, response from the host will instantly replace the working screen with this 'help' text. Major benefits are response time and reduction in host loading.

The VT420 provides an additional 12 Kb of memory for local storage and execution of down-loadable macros. Repetitive command sequences and/or text constants can be stored by applications locally in the 12 Kb buffer to improve response times and reduce communications traffic.

'DL' pricing lowers the cost

Ordering your terminal at the same time as your system, or by ordering 50 or more, reduces the unit price – see price panel for details.

Full Digital compatibility

The VT420 can operate with your existing Digital terminals and has operating modes to emulate VT52, VT100, VT220 and VT320 terminals, a further example of how Digital safeguards your investment.

Dimensions & Weights:

Monitor

Height:	12.3″	(312 mm)
Width:	12.4″	(315 mm)
Depth:	13″	(330 mm)
Weight:	18.7 lbs	(8.5 kg)

Keyboard

Height:	1.75″	(45 mm)
Width:	18.8″	(478 mm)
Depth:	7″	(191 mm)
Weight:	3 lbs	(1.4 kg)

VT420 Accessories and Supplies

Purpose made to suit your VT420 terminal.

Mobile Terminal Table **Page 99**
Frees your desk and gives your terminal mobility

Monitor Arm/Holder **Page 101**
The tidy, efficient way to work

Screen Filter – Anti-static **Page 100**
For maximum comfort

Keycaps and Overlays **Page 100**
Personalise your keyboard – and keep it clean

Terminal Cleaning Kit **Page 116**
Keeps your terminal looking like new

See how they compare

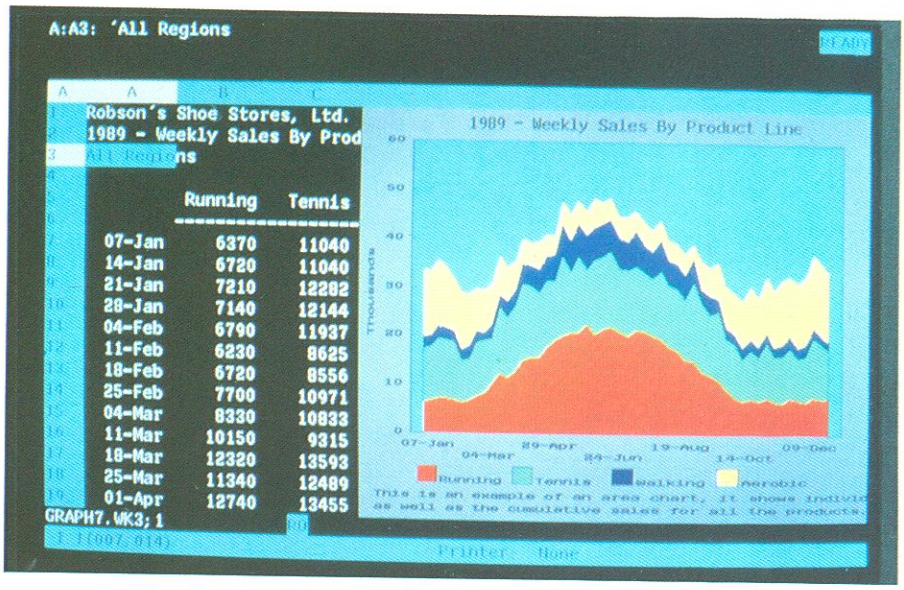
Digital's constant development programme ensures the newest products incorporate the latest technology. The new VT420 terminal is no exception. Here is a quick at-a-glance difference between the VT320 and the new VT420.

	VT420	VT320
Sessions	Dual	Single
Refresh rate	70 Hz	60 Hz
Overscan	Yes	No
Pages of local memory	6 (3 each session)	1
Lines of screen display	Up to 48*	24†
Keyboard	LK401/402	LK201

* 48 lines (text) plus 1 terminal/host status line and 1 keyboard status line

† 24 lines (text) plus 1 terminal/host status line

Part No.		Description	Price £
VT420-AE	C	Dual Session Text Video Terminal (White Phosphor, Std Keyboard)	450.00
DL-VT420-AE	C	**Special Price** (when ordering VT420-AE with system or in quantities of 50 or more)	425.00
VT420-BE	C	Dual Session Text Video Terminal (Green Phosphor, Std Keyboard)	450.00
DL-VT420-BE	C	**Special Price** (when ordering VT420-BE with system or in quantities of 50 or more)	425.00
VT420-CE	C	Dual Session Text Video Terminal (Amber Phosphor, Std Keyboard)	450.00
DL-VT420-CE	C	**Special Price** (when ordering VT420-CE with system or in quantities of 50 or more)	425.00
VT420-DE	C	Dual Session Text Video Terminal (White Phosphor, Word Processing Keyboard)	450.00
DL-VT420-DE	C	**Special Price** (when ordering VT420-DE with system or in quantities of 50 or more)	425.00
VT420-EE	C	Dual Session Text Video Terminal (Green Phosphor, Word Processing Keyboard)	450.00
DL-VT420-EE	C	**Special Price** (when ordering VT420-EE with system or in quantities of 50 or more)	425.00
VT420-FE	C	Dual Session Text Video Terminal (Amber Phosphor, Word Processing Keyboard)	450.00
DL-VT420-FE	C	**Special Price** (when ordering VT420-FE with system or in quantities of 50 or more)	425.00



VT330/VT340 Video Terminals

The perfect terminals for all software applications

The VT330/VT340 terminals offer just the right functionality to make them the ideal choice for Lotus 1-2-3 and other popular business software applications.

Now we're offering a price advantage if you order your VT330/VT340 with your system or if you buy 25 or more

It's more practical to order your terminals with your system and, now there's a cost saving too.

You can see from the pricing panel how much you save when ordering your terminal and system together. Alternatively, ordering quantities of 25 or more now also comes within our new price structure.

Terminal Features

- Compatibility with Digital's systems architecture, thus protecting your investment in Digital computing systems, software and applications
- Enhanced communications with a dual-session capability. Split screen viewing allows you to simultaneously work on and view data from different sources, on the same screen, at the same time
- Off-screen memory and local editing functions which help offload the host system and improve response times
- Ergonomic, two-piece design, with tilt and swivel base, quiet convection cooling, enclosed back panel and up front controls; offer you improved appearance and greater operator comfort

Workstation-like features

- Terminal displays that are as sharp and easy to read as your best office correspondence
- Terminals that give you high-resolution graphics and faster ReGIS and Tektronix graphics, as well as Digital sixels
- VT340 offers up to 16 displayable colours from a palette of 4,096
- Built-in mouse/tablet support

Features

- Dual-session capability with Session Switch Key
- Single or dual wire multiple session capabilities
- Horizontal and vertical split screen viewing capability
- Compatibility with Digital host systems, networks, terminals and printers
- Two screens of local graphic memory
- Higher resolution and performance
- Near letter-quality characters
- Local display format control keys
- User defined keys programmable locally
- Enhanced block mode operation for local text editing
- 25th status line
- Up front on/off, brightness and contrast controls
- Enclosed back panel connections
- Digital standard keyboard
- Off-screen text memory of more than 19,000 characters
- RS232 and DEC423 interfaces
- Uses same graphics controller as Digital's sophisticated workstation
- 800 × 500 pixel resolution gives clear, crisp text and high quality presentation graphics
- Near letter quality characters clearly readable even in 132 column mode

Note: Both VT330 and VT340 do not support video out or 20 mA connections.

Dual Session – it's like having two terminals in one

The VT330 and VT340 can display two sessions from one or two hosts simultaneously. In this mode, they operate as two terminals in one! Dual session can be accomplished in two ways.

In either single wire or separate-wire dual session, you can split the screen vertically or horizontally. Alternatively use the Session Switch Key to flip between two full sessions. **Using a single wire needs session support utilities software on the VAX system.**

The VT330 and VT340 monitors each have a bi-directional printer port. When printing from the host, you can view one session and send a separate file to the attached printer, using one line and increasing productivity.

Advanced Communications

With the VT330 and VT340's advanced communications, it's like having two terminals in one. You can log into two hosts to run two sessions simultaneously – and even view them at the same time on the same screen.

While the VT330 and VT340 are ideally suited for traditional single-session mode operation, the ability to access dual sessions, or to handle two jobs at the same time, is extremely useful in a number of applications.

Local memory gives faster response

Local terminal memory allows the VT330 and VT340 to store more data than can be displayed on the screen. The host or the keyboard operator can enter data into any part of this fully addressable memory bank, which can store up to six screens of text or two full screens of graphics.

With Local Display Control Keys, you can move information such as graphics, text and spreadsheets within the terminal and on the screen without host intervention.

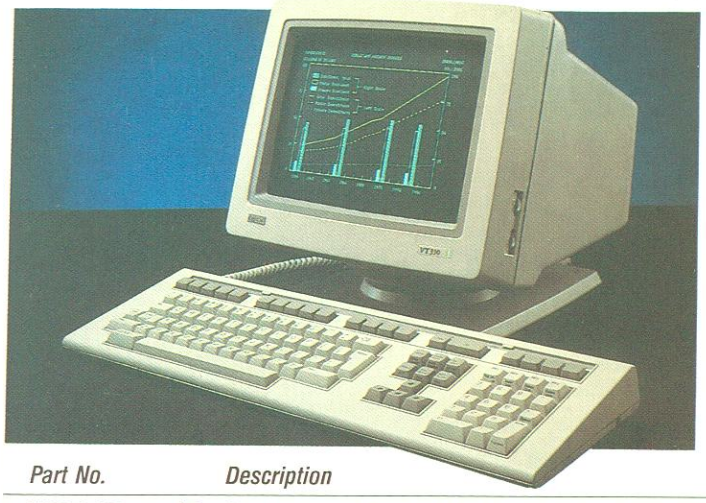
Screen Characteristics

VT330: 14″ flat-surfaced anti-glare CRT
VT340: 13″ convex anti-glare CRT
Resolution: 800 pixels × 500 lines

Dimensions and Weights:

Monitor: VT330 (includes base)

Height:	13″	(330 mm)
Width:	13.75″	(350 mm)
Depth:	14.5″	(368 mm)
Weight:	23 lbs	(10.4 kg)



Part No.		Description	Price £
VT330-GE	C	Graphics Video Terminal (White Phosphor, Std Keyboard)	1355.00
DL-VT330-GE	C	**Special price** (when ordering VT330-GE with system or in quantities of 25 or more)	1204.00
VT330-HE	C	Graphics Video Terminal (Green Phosphor, Std Keyboard)	1355.00
DL-VT330-HE	C	**Special price** (when ordering VT330-HE with system or in quantities of 25 or more)	1204.00
VT330-JE	C	Graphics Video Terminal (Amber Phosphor, Std Keyboard)	1355.00
DL-VT330-JE	C	**Special price** (when ordering VT330-JE with system or in quantities of 25 or more)	1204.00
VT330-KE	C	Graphics Video Terminal (White Phosphor, Word Processing Keyboard)	1355.00
DL-VT330-KE	C	**Special price** (when ordering VT330-KE with system or in quantities of 25 or more)	1204.00
VT330-LE	C	Graphics Video Terminal (Green Phosphor, Word Processing Keyboard)	1355.00
DL-VT330-LE	C	**Special price** (when ordering VT330-LE with system or in quantities of 25 or more)	1204.00
VT330-ME	C	Graphics Video Terminal (Amber Phosphor, Word Processing Keyboard)	1355.00
DL-VT330-ME	C	**Special price** (when ordering VT330-ME with system or in quantities of 25 or more)	1204.00
VT340-GE	C	Colour Graphics Terminal (Std Keyboard)	1959.00
DL-VT340-GE	C	**Special price** (when ordering VT340-GE with system or in quantities of 25 or more)	1884.00
VT340-KE	C	Colour Graphics Terminal (Word Processing Keyboard)	1959.00
DL-VT340-KE	C	**Special price** (when ordering VT340-KE with system or in quantities of 25 or more)	1884.00
H8571-C		Adapter to connect a second RS232 cable to VT330/VT340	13.80
VSXXX-AA	C	Mouse	159.30
VSXXX-AB	C	Graphics Tablet	905.50

Monitor: VT340 (includes base)

Height:	14.5″	(368 mm)
Width:	15.5″	(394 mm)
Depth:	16.9″	(429 mm)
Weight:	34 lbs	(15.4 kg)

Keyboard:

Height:	2″	(50 mm)
Width:	21″	(533 mm)
Depth:	6.75″	(171 mm)
Weight:	4.5 lbs	(2 kg)

Session Support Utilities

You can access two sessions on a single wire with a unique new VAX system operating VMS layered product, called Session Support Utility (SSU). This gives dual session ability without the expense of re-wiring your building.

The SSU media and supporting documentation can now be purchased on a two week lead time. Please contact Technical Support to check the part you are ordering is correct.

★ = M for 11/725, 11/730
★ = L for 11/750
★ = K for 11/780, 11/783, 11/785
★ = F for 8600, 8650
★ = D for 8800 series
★ = J for 8200, 8250
★ = H for 8300, 8350
★ = G for 8500, 8530
★ = N for MicroVAX
★ = P for VAXstation 2000
★ Substitute appropriate letter when ordering

Part No.		Description	Price £
QL-VE3A★-AA	C	Single Machine Licence	☎
QA-VE3AA-H5	C	H-Kit TK50	282.20
QA-VE3AA-HM	C	H-Kit Magtape	282.20

☎ Ring for details.

VT330/VT340 Accessories and Supplies

A wide range of additional equipment, accessories and supplies is available for your new VT330 and VT340. All are carefully designed to help you get the best performance and maximum life from your terminal.

Mobile Terminal Table **Page 99**
A movable workstation that puts your terminal close at hand
Keycaps and Overlays **Page 100**
Personalise your keyboard to your own requirements
Dust Cover **Page 98**
Quality covers help prevent dirt build-up
Mouse Mat **Page 101**
Makes mouse easier to operate
Screen Filter **Page 100**
Help overcome unwanted static
Terminal Cleaning Kit **Page 116**
Keep your terminal looking like new

VT1200 X Windows Terminal

The power of the network - and multiple windows - on your desk

The recently launched VT1000 now becomes the VT1200 with 2 Mb memory as standard and, a faster refresh rate.

The new VT1200 X Windows terminal combines Digital's No 1 networking expertise with X Windows System technology. This brings the presentation of a high-resolution workstation, and the power of the network, straight to your desktop – at an affordable price.

The eagerly awaited VT1200 is a monochrome, low-cost, high resolution, bitmapped X Window System terminal. Fully compliant with open standards, the VT1200 can run one or more applications simultaneously in a distributed computing network, and provide concurrent access to multiple hosts.

By utilising the X Window System the VT1200 can access applications across the network, across operating systems and across hardware platforms; all through a desktop terminal.

The VT1200 opens up far greater operating flexibility. There's no longer a restriction between one operating platform and another; every window you open can be a different software application running on its own host. The VT1200 has integrated VT320 compatibility which provides the benefit of multiple VT320 sessions and, full window management without the need for X protocol.

The advantage the VT1200 has over other windowing systems, is that it is not restricted to applications running only on the local workstation or local operating system. Any application written to the X11 standard can be displayed on the VT1200, including the OSF/Motif Graphical user interfaces. This gives you the benefit of performing and tracking multiple tasks running under VMS, ULTRIX, and UNIX systems simultaneously.

The VT1200 represents the very latest in open system technology, and underlines Digital's commitment to remain the standard leader in the computer industry. The new terminal incorporates the most up-to-date technologies in standardised interactive graphic interfaces, with a choice of either 1024 × 864, or 1280 × 1024 workstation screen capabilities, and standardised windowing applications.

Local VT320 Extended Mode of operation

For full visual integration of your VT320 text applications, the VT1200 has a built-in Extended Mode capability. This feature enables you to view and run one or more VT text applications simultaneously. With the local VT320 Extended Mode features, you can cut and paste between VT Windows. Only those systems running X and DEC Windows applications require X Window system software.

The advantage of DECwindows

Digital's DECwindows is based on, and fully compatible with, the X Window System. However, while the basic technology used is the same, DECwindows has the advantages of Digital's own enhancement.

With DECwindows architecture, the standard components of the X Window System are optimised to provide higher performance, reliability, and faster application development.

To achieve faster window positioning, for example, DECwindows running on a VT1200 employs algorithms and exposes the additional interfaces necessary for international keyboard support.

Other benefits of the DECwindows systems enable a programmer to check errors faster and more easily. The developer also has the advantage of greater flexibility which allows applications to run more efficiently.

The result is easy to use personal productivity tools for everyday business tasks like desktop publishing, project planning or graphics.

Memory

The VT1200 accommodates up to 4 Mb of memory. 2 Mb is supplied as standard and is suitable for text applications. Where more demanding applications, like DECwrite or DECdecision are required, memory boards are available to upgrade to a 3rd and 4th Mb.

The new VT1200 system box is configured with terminal logic which is contained in an easy-to-remove and install 1 Mb ROM module.

Choose 15" or 19" monitor options

Built into the system, is a high-performance graphics board that supports both the monitor and the X protocol. The VT1200 offers a choice of monitor sizes and resolutions: the 15" monitor gives a screen resolution of 1024 pixels and 864 scan lines; and with the 19" monitor option, a new improved resolution of 1280 × 1024 is available.

Multiple sessions and open systems

The VT1200 incorporates a standard ThinWire Ethernet connection supporting both LAT and TCP/IP protocols. The VT1200 operates with the highly efficient LAT transport when communicating with VMS operating systems, and with TCP/IP when communicating with ULTRIX and UNIX computing systems. With a VT1200, information can be interchanged between VT320, DECwindows and X Window applications residing on VAX, ULTRIX or UNIX computing systems.

VT1200 Accessories and Supplies

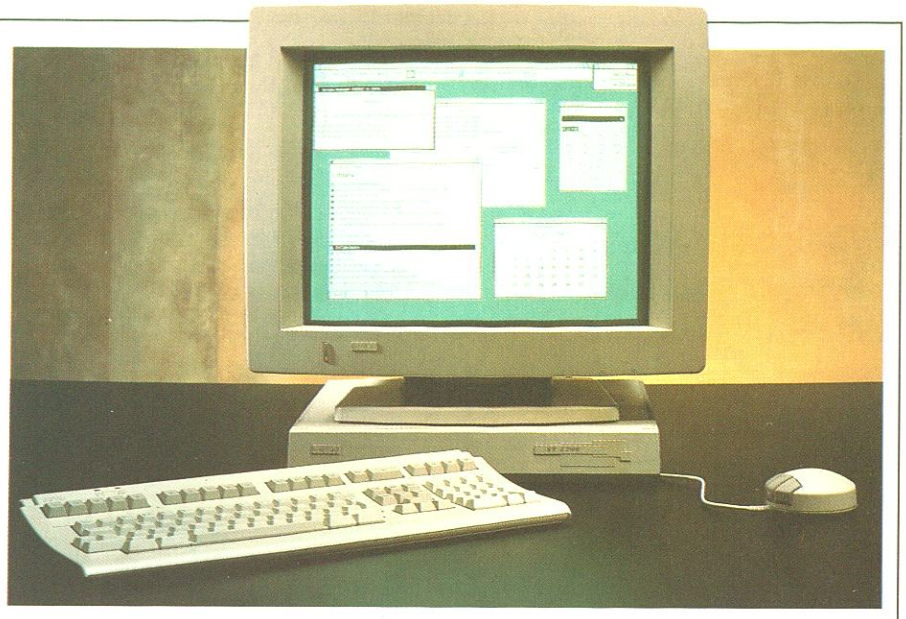
Supplies specially designed to ensure maximum benefit from your VT1200.

Terminal Cleaning Kit **Page 116**
Keeps 'as new' appearance

Mouse Mat **Page 101**
The best way to use your mouse

Keycaps and Overlays **Page 100**
Keeps keyboard clean – and easily identifiable

Memory Boards **Page 108**
Add memory as you need it



Take advantage of 'DL' pricing

If you order your terminal when you order your system, you can take advantage of the lower 'DL' pricing. There's a saving too if you order in quantities of 10 or more – see pricing panel for details.

Features

- Runs multiple VT320 sessions over LAT **without** using X protocol
- Connects to X Windows applications on VMS via LAT
- Connects to X Windows applications on UNIX and ULTRIX via TCP/IP
- Interacts over Ethernet network
- All sessions can be run concurrently
- Cut and paste between sessions
- Full window management capability
- Choice of 2 high resolution monitors; 15" 1024 × 864 pixels and 19" 1280 × 1024 monitor options
- Host based running of applications
- 2 Mb of memory standard, upgradable to 4 Mb
- New advanced LK401 keyboard
- Supports both DECwindows and OSF/Motif Graphical user interface
- Includes standard 3 button Digital mouse
- DEC423 bi-directional printer port
- Standard ThinWire Ethernet connection (comes complete with T-connector)

Dimensions & Weights:

Monitor:	**15" (VR315)**		**19" (VR319)**	
Height:	15"	(382 mm)	18.1"	(460 mm)
Width:	15"	(382 mm)	19.5"	(495 mm)
Depth:	15.6"	(396 mm)	15.8"	(401 mm)
Weight:	32 lbs	(14.4 kg)	48 lbs	(21.8 kg)

System Box:		
Height:	2.4"	(60 mm)
Width:	15.5"	(394 mm)
Depth:	14.5"	(368 mm)
Weight:	12 lbs	(5.4 kg)

Keyboard:		
Height:	1.75"	(45 mm)
Width:	18.8"	(478 mm)
Depth:	7"	(191 mm)
Weight:	3 lbs	(1.4 kg)

Part No.		*Description*	*Price £*
VX100-GE	C	15" X Windows Terminal (Std Keyboard)	2302.00
DL-VX100-GE	C	**Special Price** (when ordering VX100-GE with system or in quantities of 10 or more)	2143.00
VX100-HE	C	19" X Windows Terminal (Std Keyboard)	2858.00
DL-VX100-HE	C	**Special Price** (when ordering VX100-HE with system or in quantities of 10 or more)	2699.00
VX100-IE	C	15" X Windows Terminal (Word Processing Keyboard)	2302.00
DL-VX100-IE	C	**Special Price** (when ordering VX100-IE with system or in quantities of 10 or more)	2143.00
VX100-JE	C	19" X Windows Terminal (Word Processing Keyboard)	2858.00
DL-VX100-JE	C	**Special Price** (when ordering VX100-JE with system or in quantities of 10 or more)	2699.00
VX10X-MD	C	3rd or 4th Mb of Memory	314.00

VT1300 Video Terminal New

The colour terminal with workstation features

The new Digital VT1300 introduces high performance colour to X Window terminals.

With features normally associated with workstations; like high performance graphics and 256 displayable colours, the VT1300 is the perfect terminal for most technical and commercial colour X Window applications.

The VT1300 follows the highly successful VT1200 monochrome X Window terminal and is CVAX based with a 8 Mb memory, a graphics co-processor and 66 Hz flicker free refresh rate.

The price/performance leader

The VT1300 system's monitor is the new 19″ VR320 with a resolution of 1280 × 1024, 66 Hz, which gives sharp definition and clear easy to read display.

The specification of this latest Digital terminal together with its competitive pricing, make it the price/performance leader in high quality, high performance colour X Window terminals.

The terminal that operates like a workstation

With the VT1300 you can access literally thousands of applications normally only possible with a workstation. More than 6,000 VMS and over 1000 ULTRIX applications can be accessed, and UNIX too.

The VT1300 gives you workstation style functionality for the price of a terminal.

And the VT1300 offers you the option to upgrade to a VAXstation 3100 Model 30.

The VT1300 is compatible with VMS, ULTRIX and UNIX, and can access X based applications from both Digital and third party vendors. VAXELN window server software is downline loaded from a VMS or ULTRIX – VAX or RISC – host or server. Digital's DECwindows include; easy-to-read productivity tools for everyday tasks like desktop publishing, project planning or business graphics.

Dimensions & Weights:

Monitor:
Height: 18″ (457 mm)
Width: 19.5″ (495 mm)
Depth: 17.8″ (452 mm)
Weight: 63 lbs (29 kg)

Systems Box:
Height: 4.1″ (103 mm)
Width: 18.3″ (464 mm)
Depth: 15.5″ (394 mm)
Weight: 25 lbs (11.4 kg)

Keyboard:
Height: 1.75″ (45 mm)
Width: 18.8″ (478 mm)
Depth: 7″ (191 mm)
Weight: 3 lbs (1.4 kg)

Features

- Runs multiple DECwindows and X Window system applications simultaneously – running under the VMS, ULTRIX or UNIX operating systems
- ThinWire or Thick Wire Ethernet connection supports DECnet and TCP/IP communications
- Displays OSF/Motif applications
- Common windowing interface to all applications
- VR320 19″, high resolution, colour monitor with 1280 × 1024 resolution and 66 Hz refresh rate
- 90 nanosecond CVAX processor and graphics co-processor give high graphics performance
- 8 Mb memory standard
- Keyboard – LK201 and standard Digital mouse

VT1300 Accessories and Supplies

Specially selected for your VT1300

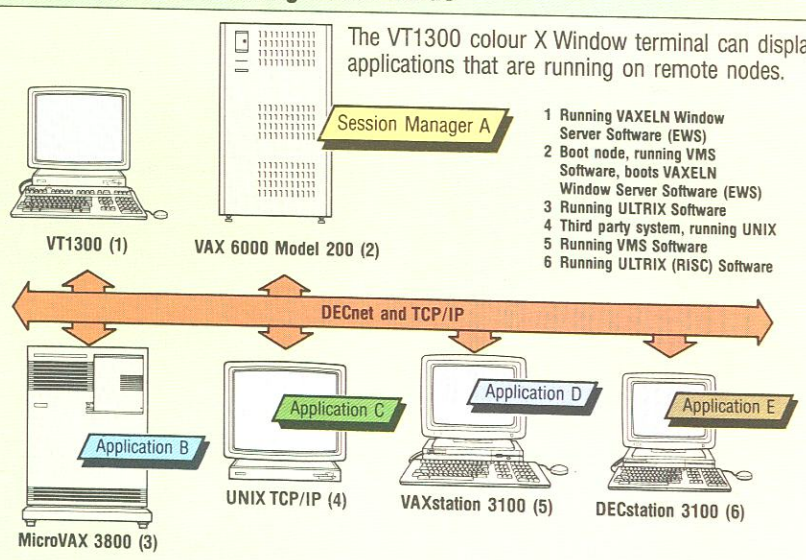
Terminal Cleaning Kit Page 116
Simple to use and highly effective

Mouse Mat Page 101
Gives the best, and easiest, control

Keycaps and Overlays Page 100
Quick identification and a bright clean keyboard

Multiple Applications Configuration Guide

The VT1300 colour X Window terminal can display applications that are running on remote nodes.



Part No.		Description	Price £
VX130-AB	C	VT1300 with TK50 Media for VMS Host	5020.00
VX130-AE	C	VT1300 with Magtape Media for VMS Host	5020.00
VX130-BB	C	VT1300 with TK50 Media for ULTRIX Host	5020.00
VX130-BE	C	VT1300 with Magtape for ULTRIX Host	5020.00
PV41K-AE	C	Country Kit including Keyboard	174.90

Section Index

Colour Printers	82/83
Dot Matrix Printers	84/90
Laser Printers	76/81
Line Printers	91/92
Printer Selection Guides	74/75

Viewpoint

The PrintServer family of printers gives you the choice of two powerful network laser printers, offering truly versatile text and graphics capability.

Now, Version 3.2 of VAX PrintServer Supporting Host Software brings you enhanced compatibility with Digital's ALL-IN-1 Office Automation Product.

These enhancements include improved ease of access to PrintServer features, selectable by the user at the print menu. This significantly reduces print queues and overheads on the host system, whilst the appearance of ALL-IN-1 menus remain unmodified.

Now, users of ALL-IN-1 can take advantage of the power of Digital's networked PostScript printers, in a seamless manner.

In addition, the support of 'DECimage' provides superior quality halftone and image printing for imaging and publishing applications, through Digital's PostScript printers.

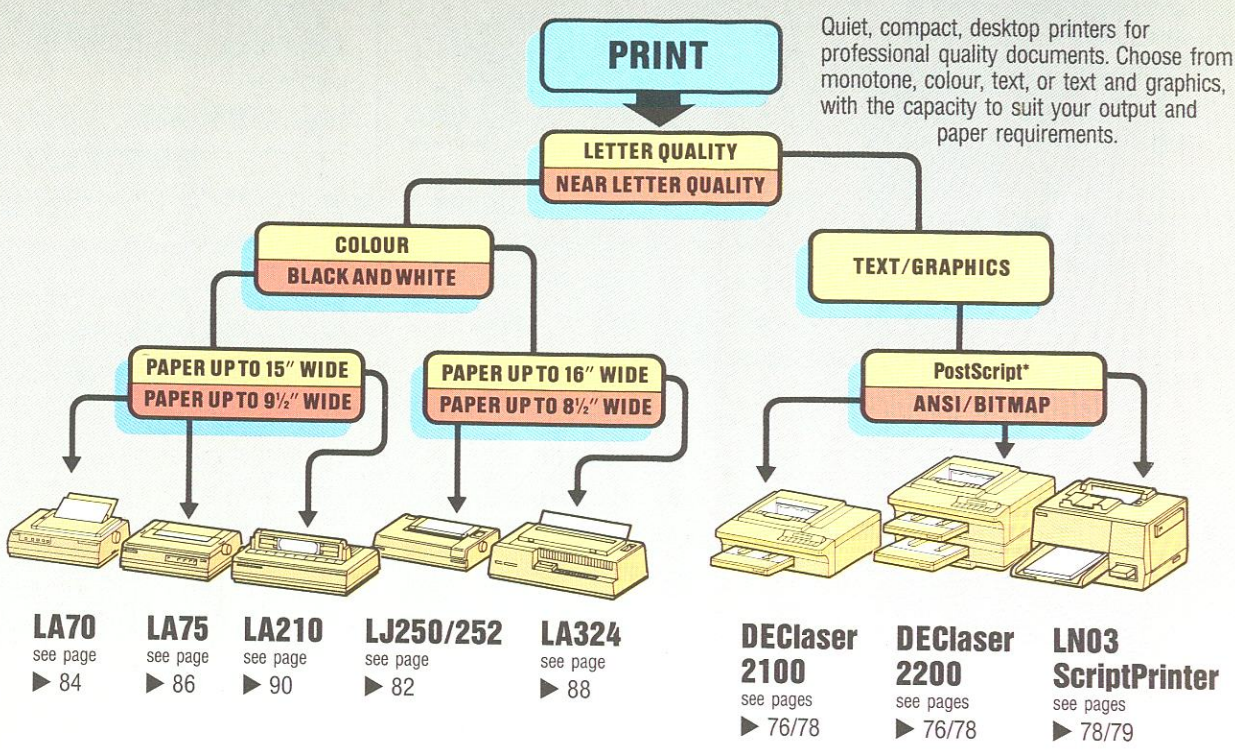
These current enhancements to PrintServer software, illustrate the commitment of Digital to extend the capabilities of the PrintServer 20 and PrintServer 40 Plus, to meet your printing needs.

Yours sincerely

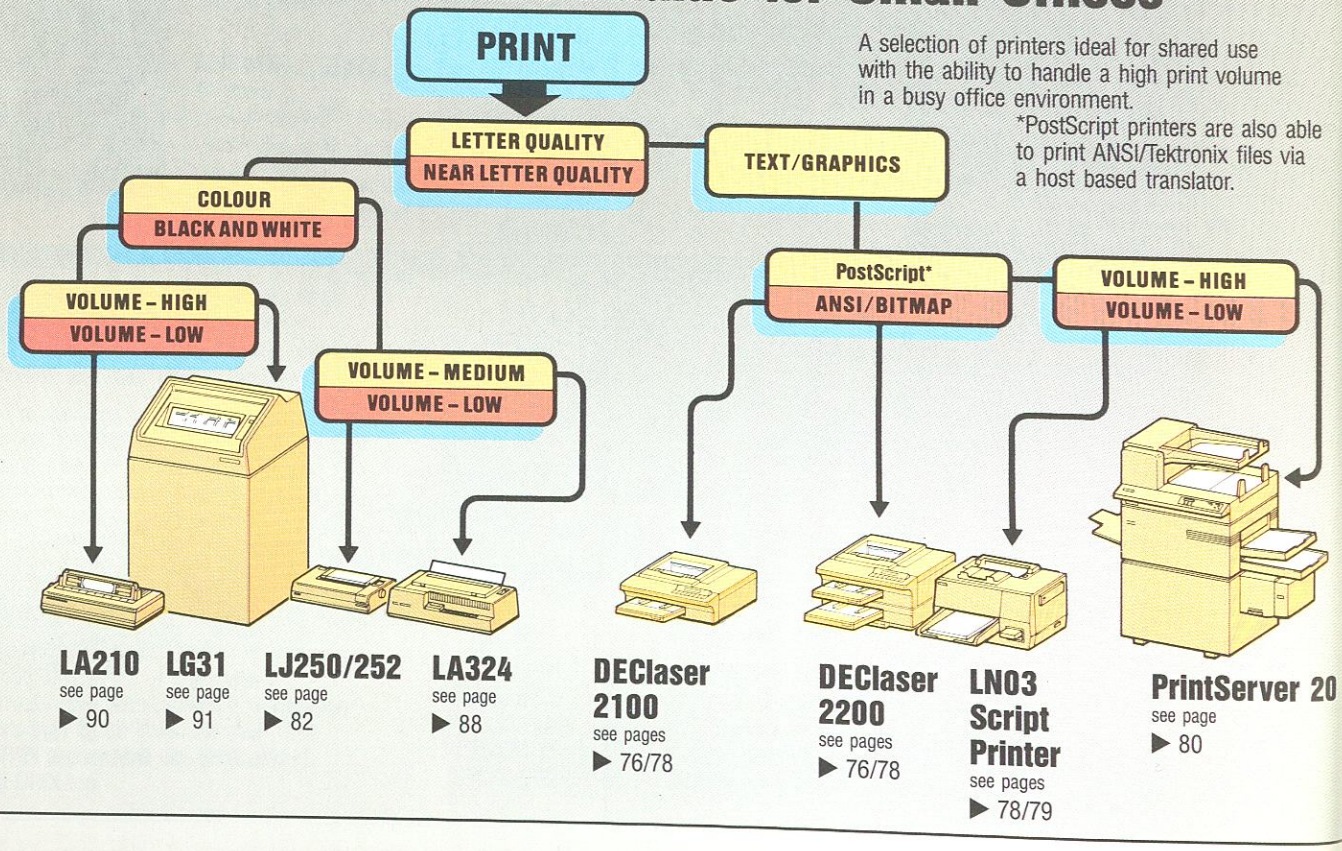
Sarah Feneck

Sarah Feneck
Merchandising Manager
Terminals and Printers

Printer Selection Guide for Individual Workstations

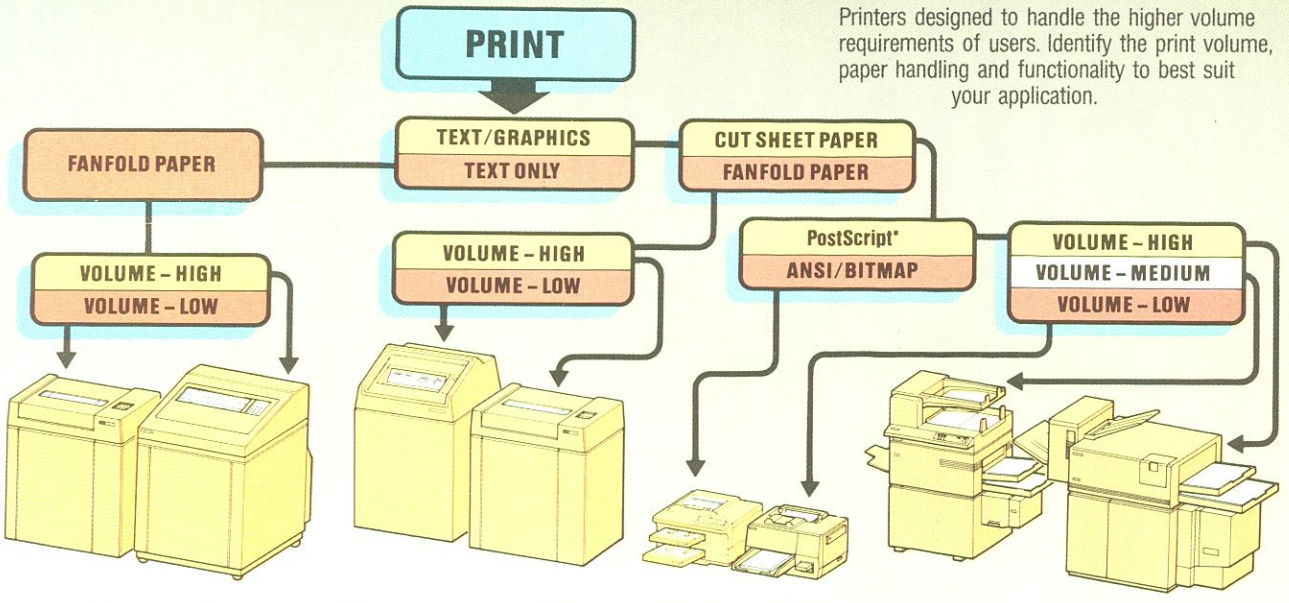

PRINT
Quiet, compact, desktop printers for professional quality documents. Choose from: monotone, colour, text, or text and graphics, with the capacity to suit your output and paper requirements.
LETTER QUALITY
NEAR LETTER QUALITY
COLOUR
BLACK AND WHITE
TEXT/GRAPHICS
PAPER UP TO 15" WIDE
PAPER UP TO 9½" WIDE
PAPER UP TO 16" WIDE
PAPER UP TO 8½" WIDE
PostScript*
ANSI/BITMAP
LA70 see page ▶ 84
LA75 see page ▶ 86
LA210 see page ▶ 90
LJ250/252 see page ▶ 82
LA324 see page ▶ 88
DEClaser 2100 see pages ▶ 76/78
DEClaser 2200 see pages ▶ 76/78
LN03 ScriptPrinter see pages ▶ 78/79

Printer Selection Guide for Small Offices


PRINT
A selection of printers ideal for shared use with the ability to handle a high print volume in a busy office environment.
*PostScript printers are also able to print ANSI/Tektronix files via a host based translator.
LETTER QUALITY
NEAR LETTER QUALITY
TEXT/GRAPHICS
COLOUR
BLACK AND WHITE
PostScript*
ANSI/BITMAP
VOLUME – HIGH
VOLUME – LOW
VOLUME – MEDIUM
VOLUME – LOW
VOLUME – HIGH
VOLUME – LOW
LA210 see page ▶ 90
LG31 see page ▶ 91
LJ250/252 see page ▶ 82
LA324 see page ▶ 88
DEClaser 2100 see pages ▶ 76/78
DEClaser 2200 see pages ▶ 76/78
LN03 Script Printer see pages ▶ 78/79
PrintServer 20 see page ▶ 80

Printer Selection Guide for Large Offices

Printers designed to handle the higher volume requirements of users. Identify the print volume, paper handling and functionality to best suit your application.



LG01
see page ▶ 92

LP37
see page ▶ 93

LG31
see page ▶ 91

LG02
see page ▶ 92

DEClaser 2100
DEClaser 2200
see pages ▶ 76/78

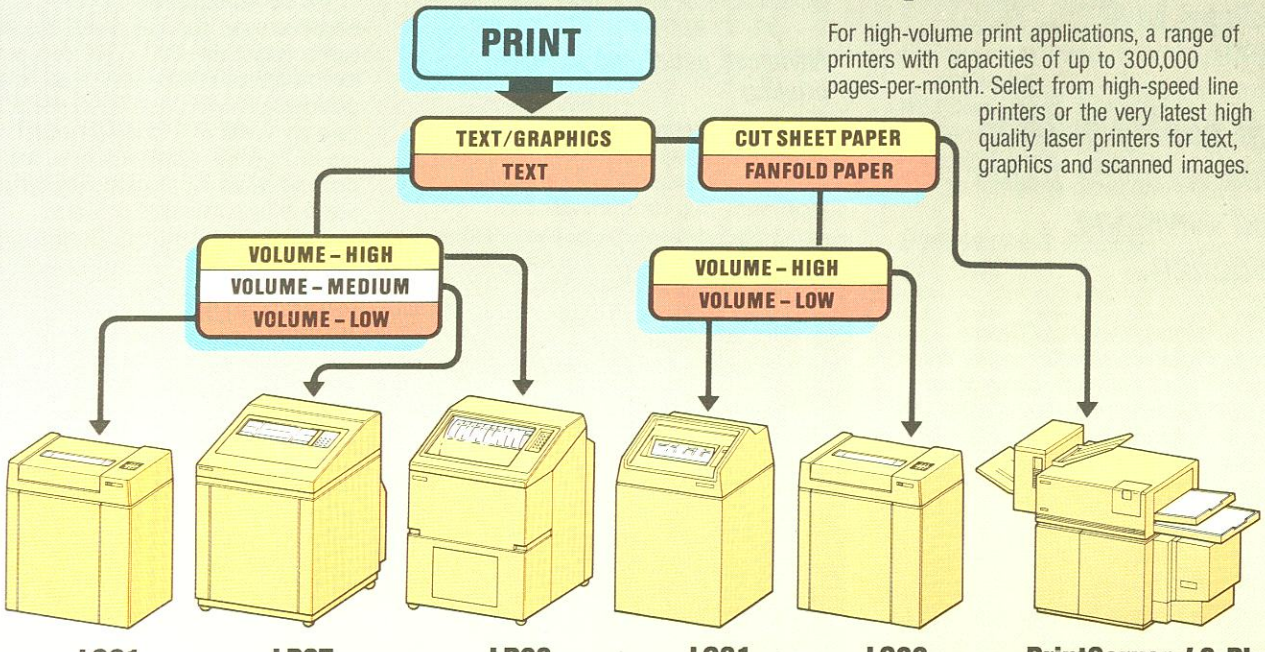
LN03 Script Printer
see pages ▶ 78/79

PrintServer 20
see page ▶ 80

PrintServer 40 Plus
see page ▶ 80

Printer Selection Guide for Computer Rooms

For high-volume print applications, a range of printers with capacities of up to 300,000 pages-per-month. Select from high-speed line printers or the very latest high quality laser printers for text, graphics and scanned images.



LG01
see page ▶ 92

LP37
see page ▶ 93

LP29
see page ▶ 93

LG31
see page ▶ 91

LG02
see page ▶ 92

PrintServer 40 Plus
see page ▶ 80

Laser Printer

DEClaser 2000 Family

Top quality printing plus versatile paper and envelope handling

In announcing the new DEClaser printers, Digital has brought together the industry's latest and most reliable printer engine technology, greater functionality for a more complete printing service, and, simplified maintenance that reduces user care to an absolute minimum.

The result is an outstanding printer family that represents a major advance in desktop lasers.

The new DEClaser 2000 printer family consists of two models, the DEClaser 2100 and the DEClaser 2200, both of which support DEC ANSI/Sixel protocols. The DEClaser 2100 is a simplex printer while the DEClaser 2200 provides the benefits of duplex printing. The duplex printing facility gives you the ability to print on both sides of a single sheet; giving your documents a more professional look and, a paper saving too.

Advanced paper and envelope printing

Paper can be fed from the standard feeder or from the optional cassettes that cater for standard, legal and international paper sizes, plus transparencies and labels. Envelopes too can be easily printed either by feeding manually or with the optional envelope cassette. This means your printing can be efficiently completed in one easy operation rather than having to print or type envelopes separately.

The sophisticated paper-handling features of the new DEClaser printers enable you to load and print up to 15 envelopes with the optional envelope cassette. And the built-in manual feed means you can override the paper cassette or envelope cassette at any time to print a single page or envelope. The DEClaser 2200 is supplied with two input trays as standard. There is an optional 1000 sheet large capacity input tray available for both models, and an automatic envelope feeder with a capacity to print up to 40 envelopes available for the DEClaser 2200.

High quality text, graphics and image

The DEClaser printers provide enhanced paper handling capabilities, high quality output with 300 x 300 dots-per-inch resolution of text, graphic and image processing. The DEClaser 2000 printers have an output of 8 prints per minute (up to 7 ppm in duplex mode) so are perfectly suited for medium duty cycle usage in both individual or shared environments. And, at only 53 dB it's quieter than a dot matrix or impact printer.

The recommended monthly print volume, in a shared environment, is up to 10,000 prints per month for the DEClaser 2100 and 12,000 prints per month for the DEClaser 2200.

The new printers support Digital's Word Processing and Office Automation applications; like ALL-IN-1, WPS PLUS, DECmate WPS. Future upgrade will give PostScript functionality with translators for ReGIS and Tektronics emulation, plus Digital's growing Office and Publications Applications such as DECwrite and VAX DOCUMENT. Both the DEClaser 2000 printers have an RS232 (female) serial and IBM/Centronics parallel interface. This interface is fitted as standard and

enables connection to all Digital devices, such as VAXstations, DECstations, Workstations, MicroVAX systems and Video Terminals, as well as to industry-standard PCs. (Users requiring DEC423 connection can utilise the RS232 to DEC423 adapter and cables supplied with the DEClaser 2000 printers.)

The smart way to print

As business becomes increasingly competitive, it will be ever more important that your company's in-house printing is of the highest standard to best reflect and promote your products or services.

The DEClaser printers provide a cost-effective method of producing documentation, presentations, text and graphics faster and with greater clarity than you would get from a dot matrix printer.

There are 36 resident fonts. They support 9 character sets and 4 typefaces:

ASCII
DEC Supplemental
ISO Latin-1 Supplemental
DEC Technical
DEC Special Graphics (VT100 line drawing)
DEC 7-bit Hebrew
DEC Hebrew Supplemental
ISO Latin-Hebrew Supplemental
Legal
Courier 10 point/10 pitch
Courier 10 point/10.3 pitch
Courier 6.7 point/13.6 pitch
Elite 10 point/12 pitch

An optional CaPSL protocol cartridge enables the DEClaser to emulate Canon brand laser printers and so take advantage of the many PC software applications running on this protocol.

The DEClaser 2000 printers support downline loadable fonts and, additional memory is offered for complex graphics and image products. The DEClaser 2100 comes as standard with 500 Kb of memory. This is suitable for up to ½ page of limited graphics. For full page complex graphics, an additional 1 Mb optional memory card is recommended.

The DEClaser 2200 comes with 1 Mb of memory as standard and, for intensive graphic print applications, an additional 1 Mb optional memory card is available.

New reduced maintenance

Another area where the new DEClaser printers take a major step forward is the simplicity of its maintenance. The cleverly designed, single, user-installable, supplies cartridge simply cuts down your work to a minimum. Never before has it been so easy to keep your printer working to optimum efficiency and, of course, with simplified maintenance there's a cost saving too.

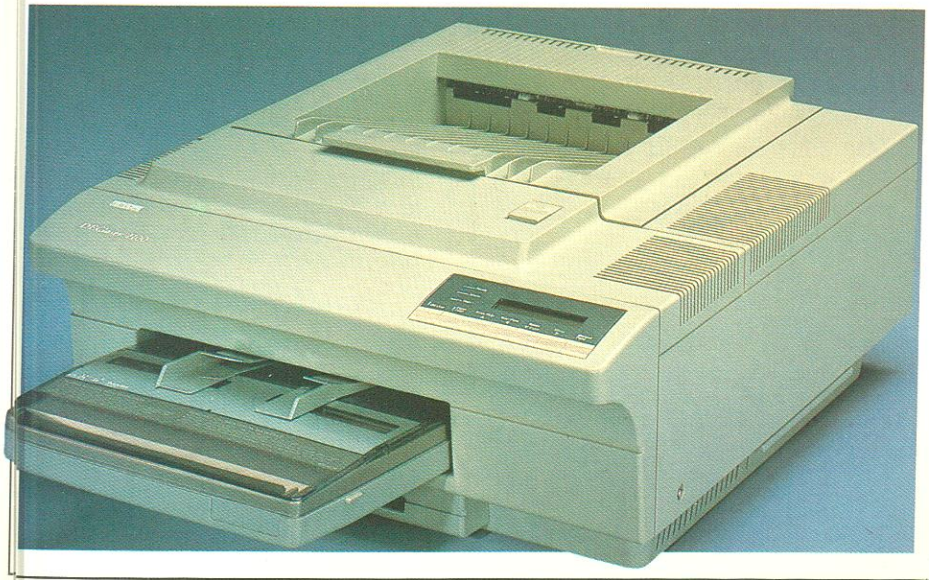
Features

- Two models: simplex and duplex
- 8 ppm print speed, up to 7 ppm in duplex mode
- 300 × 300 dpi high resolution print quality
- Prints standard office size envelopes
- Two input trays standard on DEClaser 2200
- Optional 1000 sheet large capacity input tray
- Optional auto envelope feeder for DEClaser 2200
- Paper cassettes available for choice of paper sizes plus envelopes, transparencies and labels

- Monthly print volume:
  Up to 10,000 prints per month DEClaser 2100
  Up to 12,000 prints per month DEClaser 2200
- 36 resident fonts
- Only 53 dB – quieter than dot-matrix or line printers
- RS232 (female) serial and IBM Centronics parallel interface as standard
- Easy maintenance – single supplies replacement cartridge
- Low cost of ownership
- Optional CaPSL protocol cartridge
- Compatible with Digital's DECprint architecture
- Future upgrade to PostScript
- Compact – fits desktops or optional cabinet stand
- Optional memory upgrade cards

Dimensions & Weights:

	2100		2200	
Height:	9″	(228 mm)	12.7″	(322 mm)
Width:	17.9″	(454 mm)	17.9″	(454 mm)
Depth:	20.7″	(525 mm)	26.2″	(665 mm)
Weight:	45.4lbs	(20.6 kg)	26.2 lbs	(30.4 kg)



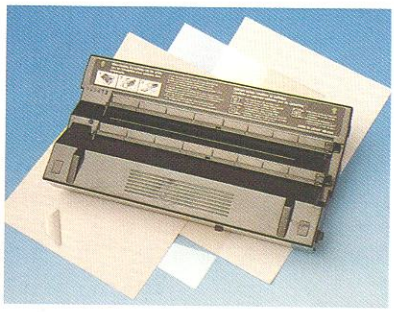
DEClaser Accessories and Supplies

CaPSL Cartridge **Page 102**
Gives Canon compatibility
Memory Cards **Page 102**
Add 1, 2 or 3 Mb extra memory
Font Cartridges **Page 102**
The right typeface for your needs
Paper Cassettes **Page 102**
Choice of 4 paper sizes, and envelopes too!
Supplies Cartridge **Page 102**
One easy operation covers essential maintenance

Starter Kit

The best way to start using your DEClaser

Everything you need to get you started including, paper, transparencies and labels.



Each kit contains:

- 2 Supplies Cartridges
- 1 Box of Labels (21 per sheet)
- 1 Box of Transparencies
- 1 Minipack of A4 Cut Sheet Paper

Promotion Kit

The kit that even includes a printer stand

This kit's got the lot and it's the ideal way to get started. Toner, labels, transparencies, paper and even a neat table stand.

Each kit contains:

- 1 Laser Table
- 1 Toner Cartridge
- 1 Box of Labels (21 per sheet)
- 1 Box of Transparencies
- 1 Minipack of A4 Cut Sheet Paper

DECprint Utility

PostScript to Sixel printing now available for this product see page 83.

Take advantage of DL pricing

DL pricing means lower prices! See pricing panel for details.

Part No.		*Description*	*Price £*
LN05-AE	C	8 ppm Simplex DEClaser 2100 printer	1860.00
DL-LN05-AE	C	**Special price** (for quantities of 10 or more LN05-AE, or if ordering with system)	1777.00
LN06-AE	C	8 ppm Duplex DEClaser 2200 printer	2770.00
DL-LN06-AE	C	**Special price** (for quantities of 10 or more LN06-AE, or if ordering with system)	2639.00
LN06X-EF		Automatic Envelope Feeder (LN06 only)	363.10
E0-LNXX-LP		Large Capacity Input Tray	603.30
E0-LNXX-PR		Promotion Kit	289.20
E0-LNXX-ST		Starter Kit	179.40

Laser Printer

LN03R ScriptPrinter

Everything you need for desktop publishing

Our desktop laser printer incorporates the PostScript Page Description Language from Adobe Systems Inc. which allows applications programmers to access full graphics and page composition capabilities through PostScript. The ScriptPrinter can print publication quality pages of text and graphics as well as produce documents at a resolution of 300 dots per inch at up to 8 pages per minute.

Features

- PostScript Page Description Language
- 29 resident typefaces
- 2 Mb of RAM for full page graphics
- 1 Mb of ROM for PostScript Interpreter
- 8 pages per minute
- 250 sheets input/output capacity
- A4 or 8.5″ × 11.5″ paper
- RS232 interface
- Supports ANSI, SIXEL, ReGIS and TEK 4010-4014 using host resident ScriptPrinter software

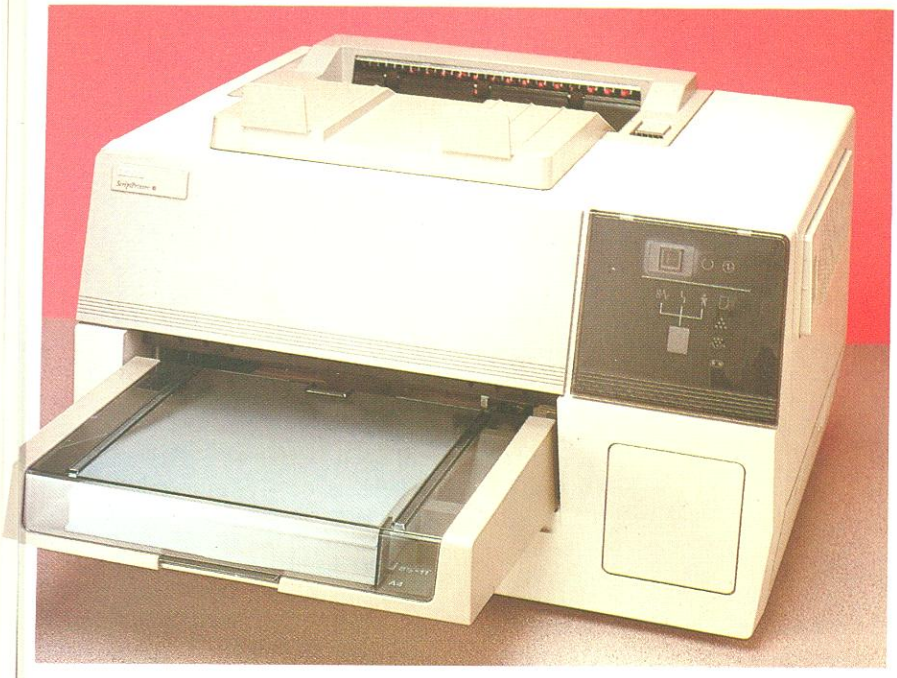
The ScriptPrinter can be used with applications programmes that produce PostScript files, such as DECwrite and DECdecision, or with Pagemaker from Aldus and Manuscript from Lotus for MS-DOS and VAXmate.

VAX ScriptPrinter Software

In order that a VAX computer may correctly process requests for the LN03R the installation of ScriptPrinter software is required. The software contains a print symbiont to process print requests like data type, page size and sheet count; a translator to convert ANSI text, SIXEL, ReGIS and Tektronix 4010/ 4014 graphics to PostScript, and a series of PostScript tools including error handling and font information.

Guide to installation symbols

- I — *Free installation by Digital*
- C — *Designed to be installed by customers*
- O — *Designed to be installed by customers Free assistance given if required*



LN03 Conversion Kits

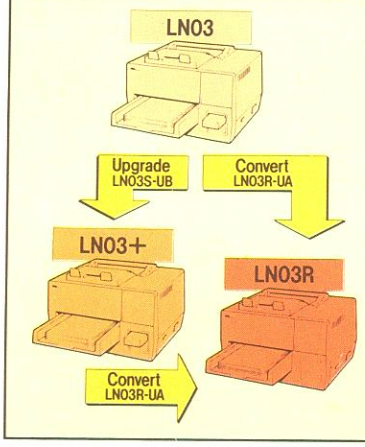
Flexibility to convert your LN03 to the graphics LN03 PLUS OR the ScriptPrinter LN03R

The LN03 offers a simple conversion path that will meet your enhanced requirements.

Your existing LN03 and LN03 PLUS laser printers can be converted by field service with our conversion kits.

Full LN03 and LN03 PLUS compatibility may be retained by using the host resident ScriptPrinter software.

Flexibility to convert



'DL' Prices mean lower prices

Order your LN03 printers when ordering your system or, in quantities of 10 or more and you save! See pricing panel for details.

LN03 Accessories and Supplies

Your new LN03 deserves the best. Choose from our extensive range of accessories and essential consumables.

Paper/Transparencies/ Labels **Pages 112/113**
Don't economise it doesn't pay

Paper Tray **Page 96**
Neatly collects your printed output

Font Cartridges Pages 103/105, 108
A choice of typestyles gives you greater versatility

User Maintenance Kits **Page 114**
Essential kit for peak performance

Toner Cartridge Kit **Page 115**
Essential consumables you'll need every 6,000 pages

Stands and Table **Pages 96/97**
The right stand for your printer

Cables and Connections **Pages 62/63**
See configuration guides for your requirements

Part No.		*Description*	*Price £*
LN03R-AE	C	LN03R Laser Printer	3951.00
DL-LN03R-AE	C	**Special price** (for quantities of 10 or more LN03R-AE, or if ordering with system)	3771.00
LN03R-UA	i	LN03 or LN03 PLUS to LN03R Scriptwriter conversion kit	2010.00
QA-VF9AA-H5	C	VAX ScriptPrinter Software (TK50)	353.80
QA-VF9AA-HM	C	VAX ScriptPrinter Software (Tape)	353.80

Laser Printers

PrintServer 20 and PrintServer 40 Plus

Power to handle the most demanding print applications

The PrintServer family gives you a choice of two powerful network laser printers offering truly versatile text and graphics capabilities. A choice of 29 resident typefaces enables you to select the style to suit a whole range of different documents. So you've always the right typeface for any particular job.

A variety of paper and transparencies can be accommodated so that anything from a simple inter-office memo to complex plans and drawings can be easily achieved.

Fast and efficient

Printing is faster and more efficient too because many of the print functions handled by the host computer are offloaded to the PrintServer. You also enjoy all the benefits of Digital's networking, plus the built-in powerful PostScript page description language.

Because it connects to the Ethernet, everyone in your organisation can take advantage of the exceptional print quality, fast output and versatility of the PrintServer.

PrintServer 20 – up to 20 pages-a-minute and Duplex printing

The PrintServer 20 is a powerful entry-level network printer designed for users with a printing requirement of up to 40,000 pages-per-month, with a print speed of up to 20 ppm. The quiet operation of the PrintServer 20 makes it ideally suited to both office and computer room environments.

The large capacity input tray holds 1,000 sheets, and two additional trays, one of which is A3 size, hold another 250 sheets each. This three tray facility gives you the versatility to use three different sizes of paper or different colour paper stock at any one time. For correspondence you can use the auxiliary trays for continuation sheet and file copy sheets. All pages are perfectly collated too, and just have to be picked from the output tray.

Furthermore the PrintServer 20 can, if required, print on both sides of the paper; this duplex facility can make producing double sided documents a quick and easy procedure, so you can produce your own high-quality documents internally. It also has the added advantage of saving otherwise wasted paper. The duplex feature is user selectable from the print command, or from applications like DECwindows that support duplex printing.

PrintServer 40 Plus – faster and more powerful

The PrintServer 40 Plus is Digital's most powerful network laser printer.

This latest PrintServer is an evolutionary development of the highly successful PrintServer 40. The PrintServer 40 Plus utilises a CMOS-based MicroVAX CPU and provides a fast document turnround for processor-intensive print jobs such as complex graphics and multi-font text.

The PrintServer 40 Plus offers near-typographic quality printing with 300 dots-per-inch resolution at speeds of up to 40 pages a minute; the sort of output that will keep pace with those users who typically print up to 100,000 pages-per-month.

High quality output

High quality printing is assured with the PrintServer. Its high resolution means a professional look to your documents for text, graphics and images.

Sophisticated printers that are easy to operate

The high-performance PrintServers are a cost-effective way of printing when shared by a number of users. With a PrintServer anyone on the network can access it. Despite its sophistication it is easy to operate, which will ensure that all operators can get maximum use from these versatile and efficient printers.

Often users have different requirements, reports for presentations, financial reports, correspondence, charts or circuit diagrams; the flexibility of the PrintServers can produce all these and more, it's like having an in-house publishing service.

Although the PrintServer is fast with a large paper capacity it doesn't take up too much space. In fact its sufficiently compact and unobtrusive you can place a PrintServer in most office environments.

Features

PrintServer 20 and 40 Plus

- The only printers in this class designed for attachment to VMS and ULTRIX DECnet environments
- Versatile 3 tray paper feed
- PostScript page description language support
- High speed Ethernet connectivity
- 29 resident type fonts
- Near-typeset 300 dots-per-inch quality
- PostScript applications software

PrintServer 20

- High quality duplex printing facility
- Up to 20 pages per minute
- Up to 40,000 pages-per-month
- Offset stacking for easy retrieval

PrintServer 40 Plus

- Up to 40 pages a minute
- Dedicated VT320 display terminal
- Large capacity input tray, 2,000 sheets
- Uses CMOS-based MicroVAX CPU

Dimensions and Weights:

PrintServer 20

Height:	49.6″	(1260 mm)
Width:	49″	(1250 mm)
Depth:	27.2″	(691 mm)
Weight:	345 lbs	(155 kg)

PrintServer 40 Plus

Height:	40.4″	(1026 mm)
Width:	60″	(1524 mm) Includes 12″ (304 mm) for second output tray
Depth:	28.4″	(721 mm)
Weight:	485 lbs	(219 kg)

PrintServer Software

The PrintServers provide Ethernet-based high speed document printing for which the software offers a variety of device queues for different document formats, ANSI, ReGIS, PostScript and TEK 4010/4014.

As an Ethernet device, the intelligence for the PrintServer, the PrintServer load host software, is loaded at power-up by a load host. Once in operation, client systems can direct print requests to the appropriate queue, the PrintServer client software. All licences bundled with the PrintServer hardware must be loaded to each client system to achieve this.

The current versions of the software support both DECnet and TCP/IP Ethernet networks. ULTRIX and VMS systems are supported as load hosts with the relevant PrintServer software.

The following environments are supported:-

- VMS and ULTRIX systems – DECnet
- VMS, ULTRIX and UNIX systems – TCP/IP-DECnet
- ULTRIX and UNIX systems – TCP/IP
- UNIX systems – TCP/IP

Digital also provide host and client software to run on its VMS and ULTRIX systems.

Users of Berkeley-based UNIX systems with non-Digital hardware can print through ULTRIX-DECnet client software to a PrintServer. By spooling through an ULTRIX node, UNIX users can access the same PrintServer as VMS users.

With the latest release of PrintServer client software, the source code is available to customers, allowing Berkeley-based UNIX system direct access to the PrintServer system.

VMS Software

Version 3.0 provides additional performance improvements and extends the capabilities of the PrintServer family, primarily in applications that make use of the ANSI (LN03) translator.

- Improved speed with ANSI translator
- Added paper size support through ANSI translator
- Duplex support for PrintServer 20
- Improved network booting performance
- Software is common to both the PrintServer 20 and the PrintServer 40 Plus
- Significant performance improvements over previous versions
- Enhanced compatibility with Digital's ALL-IN-1 Office Automation Product

ULTRIX Software

The VAX system running ULTRIX client software can be purchased if you currently have a VMS host on your Ethernet Local Area Network.

- Allows both ULTRIX and VMS print requests to be catered for by one PrintServer
- No separate licence for ULTRIX software required
- Purchase of TCP/IP software, allows a VAX, RISC, or other UNIX workstations to print on these PostScript 'engines'
- As all licences are bundled in the PrintServer hardware, load and client software can be installed to any connected system

V3.2 adds greater power and functionality

The latest PrintServer supporting host software, V3.2, provides enhanced compatibility with Digital's ALL-IN-1 Office Automation Product.

This means ALL-IN-1 users now have the power of Digital's network printers readily available for enhanced printing capability.

Duplex double-sided printing (supported on the PrintServer 20 only) and 'layup' – printing multiple pages on one sheet – and a choice of portrait or landscape formats, are all now possible. Duplex and layup also give lower paper consumption.

The 'DECimage' rendering algorithm to PostScript, provides superior quality halftone and image printing of natural images, for publishing and imaging applications, and will be exclusively available on Digital PostScript printers.

- Duplex and layup reduce costs by saving paper
- Reduction of system load and queue management tasks
- PrintServers can print at rated speeds for ALL-IN-1 'XP' printing

PrintServer 20/40 Plus Accessories and Supplies

Essential consumables and supplies, choose from our wide range to ensure optimum performance

Paper/Transparencies/ Labels **Pages 112/113**
Don't economise it doesn't pay

Auxiliary Paper Trays **Page 98**
Easy handling of different pre-printed forms

User Maintenance Kits **Pages 114/115**
Use this kit for peak performance

Toner Cartridge Kit **Pages 114/115**
Keep your image sharp

Supplies Kits **Page 115**
Maintain the high-quality output of your PrintServer 20

Cables and Connections **Pages 62/63**
See configuration guides for your requirements

Part No.		Description	Price £
LPS20-AE	i	20 ppm Laser Printer (includes country kit and cable)	19470.00
DL-LPS20-AE	i	**Special Price** (for quantities of 3 or more LPS20-AE, or if ordering with system)	18620.00
LPS40-D3	i	40 ppm Laser Printer including DECnet Licences	33920.00
DL-LPS40-D3	i	**Special Price** (for quantities of 3 or more LPS40-D3, or if ordering with system)	32220.00
LPS40-F3	i	40 ppm Laser Printer, including TCP/IP Licences	33920.00
DL-LPS40-F3	i	**Special Price** (for quantities of 3 or more LPS40-F3, or if ordering with system)	32220.00
BN18B-4E		UK Power Cord for PrintServer 40 Plus	10.40
QA-797AA-H★	C	PrintServer Client Software V3.0	647.90
QA-798AA-H★	C	PrintServer Host Software V3.0	306.10
QA-VVZAA-H★	C	PrintServer HostSoftware (DECnet/ULTRIX/TCP/IP)	333.90
QA-VVMAA-H★	C	PrintServer Client Software (ULTRIX/TCP/IP)	333.90

★ = 5 for TK50 ★ = M for 16 bpi Magtape
★ = Substitute appropriate letter or number when ordering

Colour Printers LJ250, LJ252

A quiet, compact colour printer that creates truly professional documents

Features

- Prints on paper and transparencies
- 45 dB (very quiet)
- Colour graphics and near letter quality text
- Serial interface (LJ250)
- Parallel interface (LJ252)
- Supports ANSI compatible text and colour sixel protocols
- Prints ReGIS files using host-resident RETOS software
- The LJ252 supports IBM PC compatibles
- The LJ250/252 both support HP-PCL protocol
- Prints 7 colours at 180 × 180 dpi
- 255 colours at 90 × 90 dpi
- Compact and lightweight

New lower prices

If you're ordering a Digital system make sure you order your LJ250 or LJ252 at the same time – it will save you money. A new price structure offers a preferential price when you order your system and the LJ250 or LJ252 together. For volume purchases, ordering 25 or more, see price panel for details.

Quality high-speed text and graphics colour, for your system or your PCs

The Companion Colour Printer employs the latest ink jet cartridge (consisting of printhead and ink supply) technology for high quality text and graphics printing. If you are looking for a well-built, affordable colour printer to meet all your hard copy business and presentation graphics needs, look no further. The Companion Colour Printer is the answer.

With the Companion Colour Printer, you get robust performance, exceptional reliability and award-winning support that customers expect with Digital printers.

Fast, flexible colour printing to suit your needs perfectly

If you need to print high-quality integrated text and colour graphics, you'll find that pages printed by the Colour Companion Printer look great in reports, presentations, letters, memos – virtually any type of business communication. Your text printing with the Companion Colour Printer is beautiful, clear, crisp, near-letter quality, while graphics display clear, bright colours with remarkable clarity and definition.

Advanced printhead technology is effortless to live with

The Companion Colour Printers' ink cartridges are integrated units that incorporate the ink supply system and printhead. Thus, the printhead is replaced whenever you replenish the ink supply system. It's a clean, simple, snap-out snap-in procedure that takes just seconds.

Digital accessories and supplies ensure convenience and top performance

These accessories and supplies include convenience items such as a paper catcher, dust cover, and acrylic desk stand, as well as consumables such as ink cartridges and specially coated paper and transparencies.

Remember, Digital carefully matches its accessories and supplies to its printer products – ensuring, for example, that the formulation of the ink in the Companion Colour Printers' printhead is perfectly matched to the paper and transparencies on which that ink will be used so that the highest quality and reliability is achieved.

Two models for easy connection to different host systems

The LJ250 Companion Colour Printer is the serial interface version which connects Digital systems through a DECconnect MMJ connector and cable, which are both included.

The LJ252 Companion Colour Printer, the parallel interface version, connects to IBM PCs, PC-compatibles, and other non-Digital systems through a standard Centronics-type parallel connector.

Extensive software support gets you up and running immediately

Abundant software support makes the Companion Colour Printer highly capable, highly compatible, the perfect choice for users of the VT240, VT241, VT330, and VT340 graphics video terminals, VAXmate systems, Digital workstations, and other systems.

Without question, colour graphics is becoming an increasingly popular and effective communications tool.

The Companion Colour Printer represents a new dimension in printed output.

DECprint Utility – PostScript Colour Printing

PostScript to Sixel printing for VMS now available

DECprint Utility is a new layered software product which extends the capabilities of most of Digital's ANSI/Sixel desktop printers, and enables them, via software translators, to print PostScript files.

So now, in conjunction with DECprint, the LJ250 can give you the ability to produce high quality, full colour output of your PostScript files, giving you complete versatility and the convenience of local print control.

DECprint Utility uses a standard DCL interface, and most of the familiar line qualifiers and operates with any VAX system running VMS V5.1 or later; or with VMS workstations Software V4.2.

Dimensions and Weight:

Height:	3.65″	(92 mm)
Width:	17.5″	(444 mm)
Depth:	12.25″	(311 mm)
Weight:	10 lbs	(4.5 kg)

LJ250/252 Accessories and Supplies

Choose from our wide range of equipment, accessories and supplies, and get the most from your LJ250/252 printers.

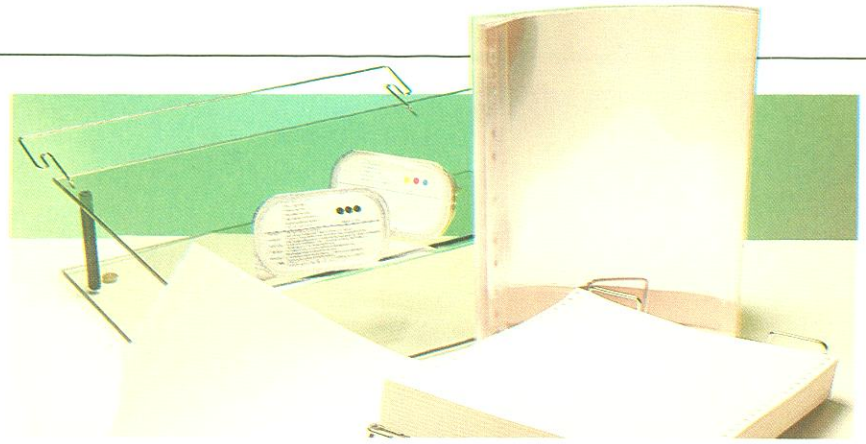
Paper/Transparencies **Pages 112/113**
Digital supplies make sure of the best results

Ink Cartridges **Page 114**
The only cartridges recommended for your printer

Stands **Pages 96/98**
For convenience and better use of desk space

Dust Cover **Page 98**
Protects your printer against harmful dirt

Paper Catcher **Page 98**
No more messy trails of paper



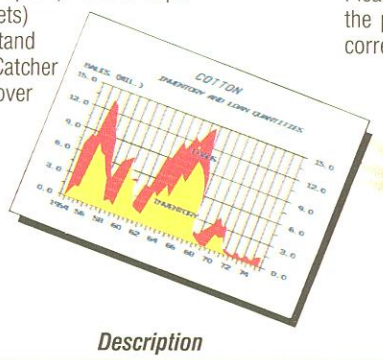
LJ250 Starter Kit

The perfect starter kit for the LJ250 – and you save money

This is the best way to make sure you've everything you need for your new LJ250 or LJ252 printer.

Each kit contains:

1 Black Ink Cartridge
1 Coloured Ink Cartridge
1 A4 (European) Cut Sheet Transparencies (box of 50)
1 A4 (European) Fanfold Paper (250 sheets)
1 Desk Stand
1 Paper Catcher
1 Dust Cover



VAX ReGIS to Sixel Converter – RETOS

RETOS makes it easier than ever for ReGIS users to enjoy fast, flexible, full-features printing capabilities on Digital printers. RETOS is a layered VMS software product that converts ReGIS graphics files to sixel files. Sixel files created by RETOS can be printed on any one of the many popular Digital printers that support the sixel protocol, including the LJ250 and DEClaser 2000 printers. Please contact Technical Support to check the part number you are ordering is correct.

Part No.		*Description*	*Price £*
LJ250-AE	I	Companion Colour Printer – Serial Interface. Complete with 10′ Cable	1231.00
DL-LJ250-AE	I	**Special price** (for quantities of 25 or more LJ250-AE, or if ordering with system)	1112.00
LJ252-AE	I	Companion Colour Printer – Parallel. Complete with 10′ Cable	1231.00
DL-LJ252-AE	I	**Special price** (for quantities of 25 or more LJ252,AE, or if ordering with system)	1112.00
E0-LJ25X-PR		Starter Kit	169.90
QL-VEFA★-AA	C	Single User Licence	☎
QA-VEFAA-H5	C	RETOS H-Kit TK50	322.00
QA-VEFAA-HM	C	RETOS H-Kit Tape	322.00
QA-VZPAA-H#	C	DECprint Utility Media and Documentation	206.70
QL-VZPA9-PB	C	DECprint Utility Single User Licence	827.90

☎ Ring for Details.

= M for 16 bpi Magtape # = 5 for TK50
★ = 2 for VAX 6210/6310/6000-210/6000-310/4000-300
★ = J for VAX 8200/8250
★ = H for VAX 8300/8350
★ = G for VAX 8530
★ = F for VAX 8600/8650
★ = E for VAX 8700/8550/8810
★ = Q for VAXstation II
★ = R for VAXstation 2000
★ = C for VAXstation 3100/3200/3500/3520/3540/8000
★ = N for MicroVAX II
★ = P for MicroVAX 2000/3100
★ = S for MicroVAX 3300/3400
★ = B for MicroVAX 3500/3600/3800/3900
#/★ Substitute appropriate letter and number when ordering

Dot Matrix Printer LA70

The low-cost personal printer for general business applications

The LA70 Personal Printer is an entry-level narrow carriage personal desktop printer. It has been designed to offer convenient personal printing for lower volume applications such as word processing, screen dump graphics and other general business applications.

The LA70 uses trouble-free 9-wire dot matrix technology for text and bit-map graphics printing. Reliability plus excellent value and a high level of functionality make the LA70 the perfect low-cost printer to complement your PC, workstation or terminal.

The LA70 has both serial and parallel interfaces built in, offering compatibility not only with Digital systems, but with industry-standard PCs too.

Although inexpensive, quality and functionality haven't been compromised, just as you'd expect with a Digital product. In fact, many of the benefits associated with the successful LA75 companion printer can be found on the LA70.

New lower prices

If you're ordering a Digital system it will be more cost effective to order your printer at the same time and take advantage of the new lower price.

The new lower price option also applies to volume purchases when ordering 25 or more LA70s, look at the pricing panel for details.

A choice of 3 print modes

The LA70 gives you a choice of three print modes: Near Letter Quality, memo and draft. These print modes are selectable either via the User Set Up Menu feature, or directly from the host software. The LA70 prints text with superscript, subscript, underline, double underline, shadow, bold, italics, strike-through and overline. Print speeds of up to 200 characters-per-second can be achieved by this printer. And it's quiet too; you can operate at 55 dB, or switch to the 52 dB extra quiet mode.

The printer that's easy to work with

The LA70 features an auto-loading function so you no longer have to manually advance tractor-fed paper to achieve top-of-form positioning. After you load the paper onto the tractor feed mechanism, just push the form feed button to automatically advance the paper to the first printable position.

In addition, a viewing feature enables the LA70 to automatically advance the page a few lines at the end of the text, making the last few printed lines easy to read. This also positions the text neatly above the 'tear-off' bar for ease of removing printed work. If, however, more text needs to be added to the document, the LA70 automatically re-positions the paper so that the printing continues where you left off.

Another feature of the LA70 which greatly improves efficiency, is the ability to switch from fanfold to cut sheet paper – at the touch of a button. For example, should you wish to print onto single sheet paper when the printer is loaded with fanfold paper, you can 'park' the tractor paper, by simply pressing a button, and the tractor paper moves out of the way allowing you to print on a single cut sheet. Once you've finished, touch the form feed button again and the LA70 returns to it's original position and you're ready to print on the tractor paper again.

Choose the paper to suit your needs

You can use fanfold, single sheet or multipart forms (original plus 2), even envelopes and labels; all can be accommodated with the LA70. And, to save you from wasting a single sheet of paper, it has a built in tractor feed, along with a built in low-tear bar that enables you to separate printed from unprinted pages.

Features

- Easy to operate
- Quiet mode, only 52 dB
- Three print speeds from NLQ to 200 cps draft mode – at the touch of a button
- Accommodates a range of paper, envelope and label types and sizes
- Automatic paper feeding
- Document on demand
- Quick text viewing
- Auto-park paper facility
- Resident ANSI and IBM ProPrinter protocols
- Reliable 9-wire dot matrix technology
- Resident serial (DEC423) and parallel (centronics) interfaces; RS232-C compatible with adapters
- Compatible with LA75
- Optional single bin sheet feeder

Dimensions and Weight:

Height:	4.7"	(120 mm)
Width:	15.7"	(400 mm)
Depth:	11.4"	(290 mm)
Weight:	16 lbs	(7.5 kg)

DECprint Utility

PostScript to Sixel printing now available for this product.
See page 83.

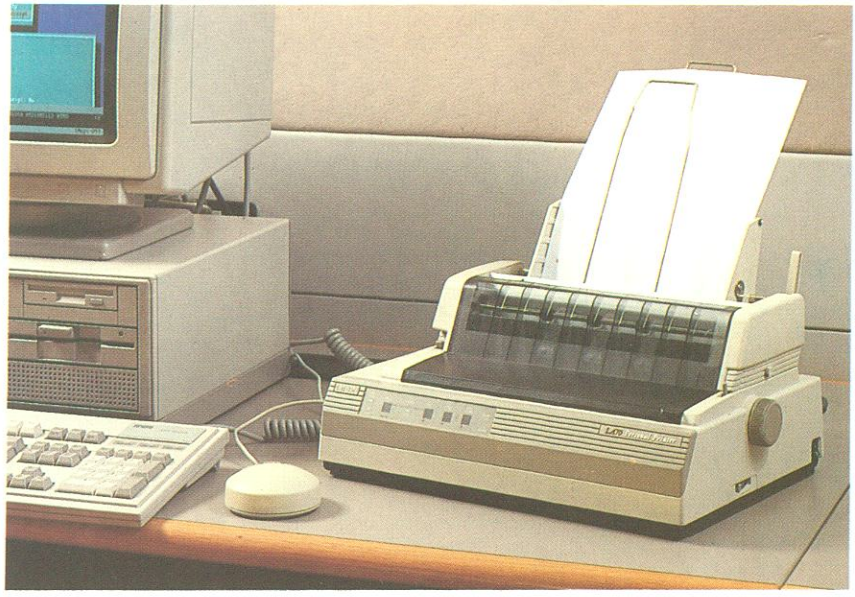
LA70 Single-bin Sheet Feeder

The easy way to feed pre-cut paper

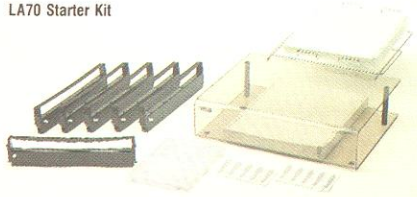
The LA70 single-bin sheet feeder makes handling pre-cut paper a simple operation. Just load up the sheet feeder with your stationery and it automatically feeds it into the printer.

The sheet feeder has a large volume paper holder and can alternate letterheads and continuation sheets as well as handling other types of pre-printed stationery.

See page 87 for RS232 Connections Guide for your LA70 printer.



LA70 Starter Kit



LA70 Starter Kit

The perfect kit to get you going – and at considerable saving

This kit has been devised to give you all the essential items you need to get started. Consumables, including paper, maintenance items plus a deskstand and paper catchers.

Each kit contains:

- 6 Ribbons
- 1 Platen Cleaner Kit
- 1 Dust Cover
- 1 Deskstand with Paper Catcher
- 2 Minipacks of Fanfold Paper 11″ and 12″

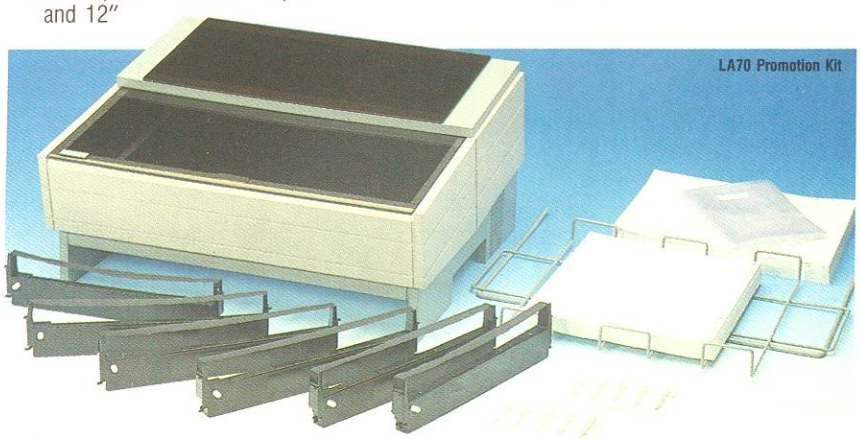
LA70 Promotion Kit

The start-up kit that includes an acoustic cover

This kit is the ideal way to get started and enjoy the quieter working environment you'll get from using an acoustic cover – and at a cost saving!

Each kit contains:

- 1 Platen Cleaner Kit
- 6 Ribbons
- 1 Acoustic Cover with Deskstand and Paper Catcher
- 2 Minipacks of Fanfold Paper 11″ and 12″



LA70 Promotion Kit

LA70 Accessories and Supplies

A wide range of additional equipment, accessories and supplies, all carefully designed for your new LA70. You'll get the best performance from your printer and maximum life.

Paper **Pages 112/113**
Inferior paper can waste time and money

Ribbons **Pages 110/111**
Ensure the best results

Platen Cleaning Kit **Page 116**
Clears unwanted ink build-up

Cables/Connectors **Pages 62/63**
Installation and connections to suit your needs

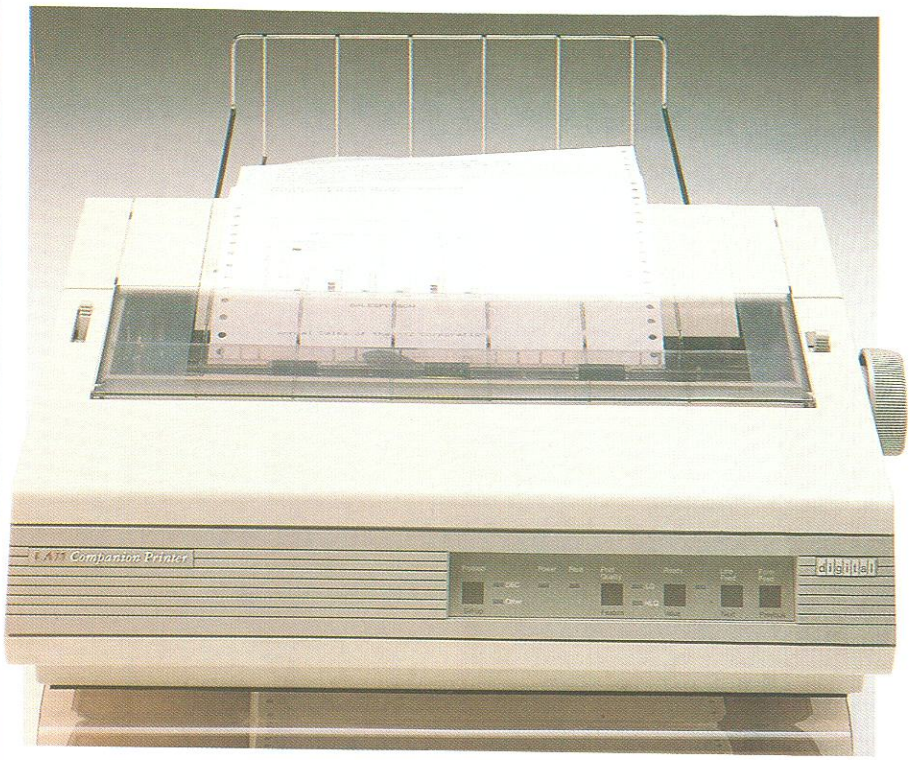
Stands **Pages 96/98**
Mobility for ease of locating

Acoustic cover **Page 95**
Keeps the office quiet

Paper Catcher **Page 98**
For neat paper stacking – automatically

Serial Interface Crossover Switch **Page 61**
Adds versatility to screens and printers

Part No.		*Description*	*Price £*
LA70-AE	C	Personal Printer (serial and parallel interface) with 10′ Cable	357.80
DL-LA70-AE	C	**Special Price** (when ordering LA70-AE with system, or for quantities of 25 or more)	337.90
LA70X-SF	C	Single Bin Sheet Feeder	182.90
E0-LA70X-ST		Starter Kit	71.70
E0-LA70X-PR		Promotion Kit	188.80



Dot Matrix Printer LA75

The fast, quality output printer that's suitable for terminal use

The LA75 is a versatile dot matrix printer with four speeds – from letter quality to fast draft mode.

It's perfect for office use and ideal for general business applications of up to 2000 pages-per-month.

New pricing structure means lower prices

If you're ordering a Digital system it will pay you to order your printer at the same time and take advantage of the new lower price.

The new price option also applies to volume purchases when ordering 25 or more LA75s, look at the pricing panel for details.

The LA75 is the ideal printer for users requiring local printing capabilities. This quiet, feature-packed, desktop printer is perfect for your video terminal or personal workstation.

It supports the new DECconnect architecture based on the DEC423 connector. If you require RS232 connections, simply refer to the connections guide opposite for your proper configurations. Connections are easy with the simple adapters and telephone style snap-in snap-out modular jacks for host to printer communications.

LA75 Features

- Quiet, at only 55 dB it's perfect for an office environment
- Four print speeds from letter quality to 250 cps draft mode – at the touch of a button
- Push/pull tractors with bottom paper feed – neater and more convenient
- Easy to use fingertip controls
- Robust and reliable
- Compact design takes up less desk space
- Lightweight – so it's easy to move
- LA50 and LA75 supplies and accessories are all interchangeable
- Supplied with cable for instant connection 10′ EO-BC16E – DEC423 serial version

DECprint Utility

PostScript to Sixel printing now available for this product
see page 83.

Dimensions and Weight:

Height:	4.8″	(122 mm)
Width:	16.8″	(427 mm)
Depth:	13.6″	(345 mm)
Weight:	21 lbs	(9.5 kg)

LA75 Starter Kit

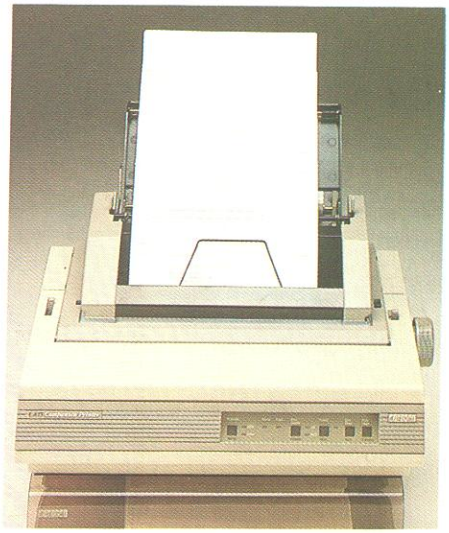
Everything you need to get started – and saves you money

This valuable kit contains all the accessories and supplies you need to

start using the LA75 as well as products to care for the printer and make its operation efficient.

Each kit contains:

6 Ribbons
1 Minipack Word Processing Paper $9\frac{1}{2}'' \times 11''$ (250 sheets)
1 Minipack Word Processing Paper $9\frac{1}{2}'' \times 12''$ (250 sheets)
1 Platen Cleaner Kit
1 Paper Holder
1 Dust Cover
1 Desk Stand.



LA75 Accessories and Supplies

A wide range of additional equipment, accessories and supplies is available for your new LA75. All are carefully designed to help you get the best performance and maximum life from your printer.

Paper **Pages 112/113**
Inferior paper is false economy

Ribbons **Pages 110/111**
Specially selected to give the best results

Font Cartridges **Page 103**
For a wider choice of typeface styles

Platen Cleaning Kit **Page 116**
Gets rid of unwanted ink build-up

Cables/Connectors **Pages 62/63**
Add versatility to your system

Stands **Pages 96/98**
Adds mobility for greater convenience

Acoustic cover **Page 95**
For a more peaceful working environment

Paper Catcher **Page 98**
Your printout will stack neatly and automatically

Serial Interface Crossover Switch **Page 61**
Gives added versatility to your screens and printers

LA75 Single-bin Sheet Feeder

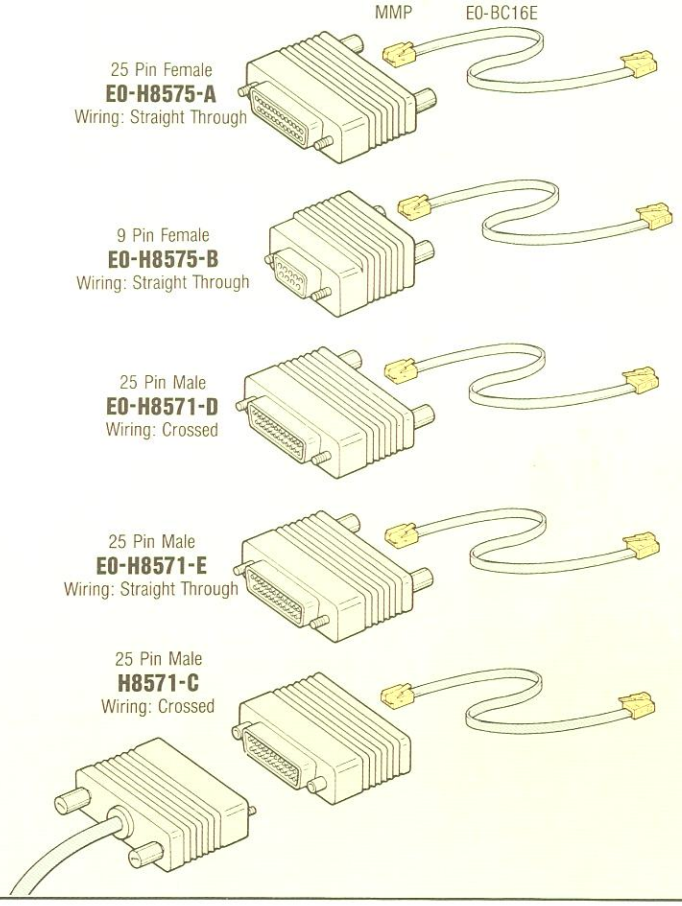
Feeds your letterheads and other stationery to produce high quality correspondence

This option is designed to feed pre-cut paper automatically to your LA75, enabling you to produce the highest quality documents.

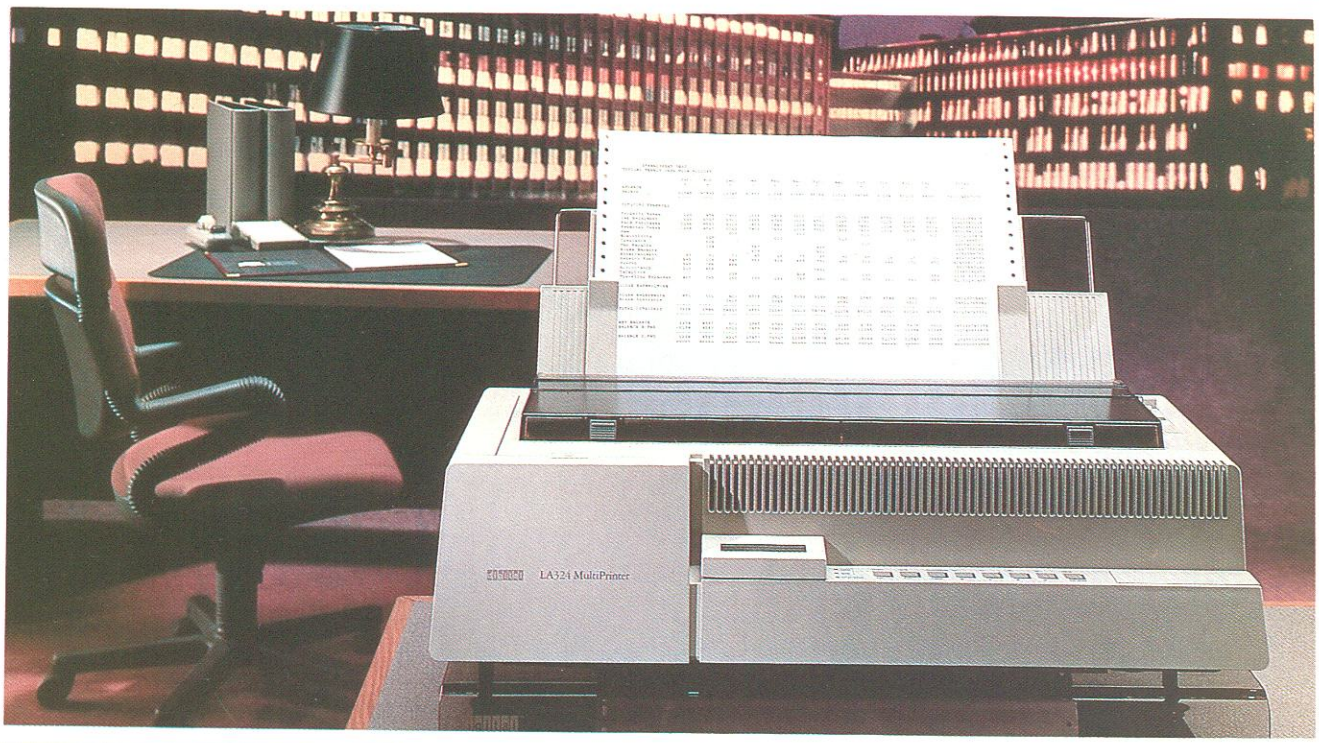
Smooth, reliable and equipped with a large volume paper holder. Documents are more presentable, letterheading and continuation sheets can be alternated as required along with other types of pre-printed stationery.

RS232 Connections Guide for your LA75 and LA70 printers

The LA75 and LA70 are supplied with a 10′ cable.
If you require a longer cable please order accordingly.



Part No.		*Description*	*Price £*
LA75-AE	G	Serial Companion Printer with 10 ft Cable	632.00
DL-LA75-AE	G	**Special price** (for quantities of 25 or more LA75-AE, or if ordering with system)	592.30
E0-LA75X-PR		LA75 Starter Kit	83.10
LA75X-SF	G	Sheet Feeder Single Bin	298.10
E0-BC16E-10		Connecting Cable – 10ft	2.80
E0-BC16E-25		Connecting Cable – 25ft	4.80
E0-BC16E-50		Connecting Cable – 50ft	8.30
E0-H8575-A		Adapter	15.90
E0-H8575-B		Adapter	17.30
H8571-C		Adapter	13.80
E0-H8571-D		Adapter	18.60
E0-H8571-E		Adapter	21.40



Dot Matrix Printer

LA324 MultiPrinter

High-resolution, wide carriage printer with colour capability

The LA324 is Digital's newest and its most versatile desktop printer. It provides a high-resolution, receive only, impact dot matrix output to a 135 column format carriage. It is fast, efficient and ideally suited to high volume applications.

At 55 dB, the LA324 is ideal for most office environments, but offers a user selectable option of an even quieter printing mode which ensures a noise level of 51 dB is never exceeded.

A single ribbon change provides a colour option for more effective graphics, text, underlining and highlighting. Used in conjunction with the font cartridges now available, combinations of typefaces and colour can be achieved to produce truly effective business documents.

Superior paper handling

The advanced paper handling abilities of the LA324 MultiPrinter are well suited to the many requirements of the busy office, including label and 6 part form production.

In addition, automatic parking and loading of tractor fed paper helps smooth the day to day use of the LA324. Spreadsheet users will find the wide carriage particularly useful. A three bin automatic sheet feeder is available as an option to add even greater convenience to this remarkable printer.

The 24 wire printhead comfortably handles all text and graphic requirements and the use of the latest paper handling technology. Different print modes provide a choice of draft printing speed at 300 cps or letter quality at 100 cps.

Versatile – capable

The LA324 produces underlining, shadow bolding, double width, plus bar codes and eight colour printing. It's capacity of 5,000 pages-per-month, plus it's dependability makes the LA324 ideally suited to busy offices and production environments, where high volume on-line processing is common place.

The LA324 MultiPrinter is easy to use, and features a fingertip operated menu and LCD display for fast and accurate operation.

Take advantage of special pricing system

If you order your new LA324 MultiPrinter with your system or order in quantities of 25 or more you can buy at lower prices. Look at the pricing panel and see how much you can save.

Digital and IBM compatible

Like all Digital products, the LA324 MultiPrinter offers the very latest technological development. The result is compatibility with Digital's DECstation PC family, workstations and any VAX or PDP-11 system.

The LA324 has both a standard serial (DEC423) interface and a Centronics parallel interface to make it compatible with a wide variety of IBM or IBM-compatible hosts. When the LA324 is operating in IBM ProPrinter XL24 mode, an extensive range of PC applications can be supported.

Note: IBM ProPrinter does not support colour output.

Features

- High resolution output from 24-wire printhead
- High quality text and graphics, combined with eight colour printing
- Versatile paper handling plus envelopes and labels
- Quiet printing mode for unobtrusive operation in office environment
- Document on demand and low tear off capability cuts out paper waste
- Auto-parking and loading of tractor fed paper for ease of handling
- Compatibility gives interconnection with existing Digital equipment
- IBM compatible

LA324 Automatic Triple Bin Sheet Feeder

Automate your LA324 for slick, efficient paper handling

The new automatic triple bin sheet feeder is the perfect addition to your LA324 printer. It allows the automatic and reliable feeding of single sheets, multi-part forms, envelopes, bank transfer notes and similar items of stationery. The new sheet feeder means you get the very best and most efficient use from your LA324 printer.

The single sheet or multi-part forms are contained in three adjustable paper feed bins for fast efficient printing. Bin selection is simply activated by escape command. Once printed, the feeder automatically ejects the finished items into the output collator on a 'first-in-first-out' basis. To automatically insert envelopes for example, the paper separation of the first bin can be switched for this purpose.

LA324 Accessories and Supplies

A range of additional equipment, accessories and supplies are available to enhance you new LA324.

Paper **Pages 112/113**
Choice of quality fanfold or cut sheet

Ribbons **Pages 110/111**
Only Digital ribbons give the best results

Font Cartridges **Page 103**
A typeface to suit your business

Stands **Pages 96/98**
Place your printer in the best position

Acoustic Covers **Page 95**
For a quiet environment

Cables and Connections **Pages 62/63**
Check the guide for suitable supplies

DECprint Utility

PostScript to Sixel printing now available for this product see page 83.

Dimensions and Weight:

Height:	6.7″	(170 mm)
Width:	24.2″	(615 mm)
Depth:	12.2″	(310 mm)
Weight:	31.5 lbs	(14.3 kg)

LA324 Promotion Kit

Everything you need – at a special price

This kit will give you everything you need for your new LA324. It includes a stand, an acoustic cover and everything contained in the starter kit. A great value kit.

Each kit contains:

- 1 Starter Kit
- 1 Acoustic Cover
- 1 Stand

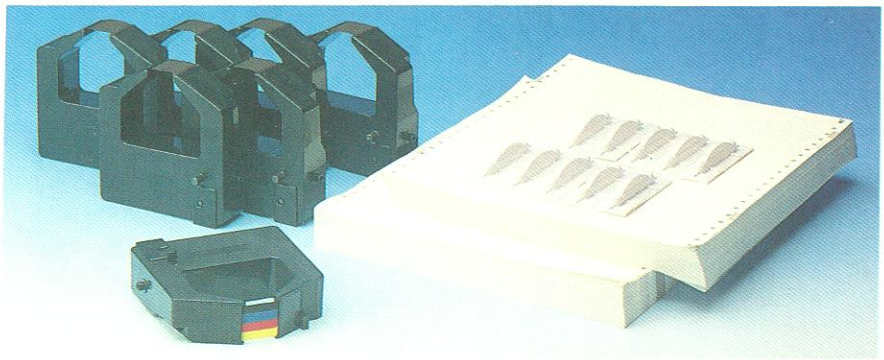
LA324 Starter Kit

Be sure you're not short of essential consumables

Order your LA324 Starter Kit when you order your new printer – perfectly matched to the quality of the LA324, it will ensure you get the full performance and benefit from the very first document.

Each kit contains:

- 1 Box of 6 Black Ribbons
- 1 Sample Colour Ribbon
- 2 Minipacks of Fanfold Paper 11″ and 12″
- 1 Box of Platen Cleaners



Part No.		*Description*	*Price £*
LA324-AE	C	LA324 MultiPrinter (serial and Parallel interface) and 10′ Cable	1586.00
DL-LA324-AE	C	**Special Price** (for quantities of 25 or more LA324-A3, or if ordering with system)	1427.00
LA24X-SF		Sheet Feeder for LA324	632.00
E0-LA24X-ST		Starter Kit	68.00
E0-LA24X-PR		Promotion Kit	564.00

Dot Matrix Printer LA210

The perfect companion to your terminal or PC

The LA210 desktop dot matrix receive only printer has a compact style that complements any personal computer system or video terminal.

The LA210 is ideal for use with office workstations and small business computer systems. It operates in text or graphics mode. You can select near-letter quality or draft quality printing.

- 40 cps Near Letter Quality Mode
- 240 cps Draft Mode

The LA210 is specially designed to keep the noise level down. In fact, new acoustic treatment reduces the noise level to <58 dB. But you won't get reduced quality. An improved print head gives you better print quality than ever before.

The printer comes complete with a forms tractor that easily guides paper and 4 part forms. And you can purchase a bi-directional tractor for special functions such as super or subscripts and multi-column printing. You can feed paper from the back of the printer (single-part only) or through a slot in the bottom of the printer.

You can choose from a wide selection of easily interchangeable fonts for use with the LA210. You can even use the ones you already have from an LA100 printer. The ribbon comes in a disposable cartridge for convenience.

New pricing structure

There is now a special price for ordering quantities of 25 or more LA210's, so consider your future needs. This special price is also applicable when you order your LA210 with a system. See the pricing panel for details.

LA210 Options for IBM PC

There is an optional provision to add an external parallel interface which provides the capability to connect the LA210 to the IBM PC.

In the IBM PC mode the printer can emulate the IBM Graphics printer through customer switch settings and plug-in font cartridges.

Features

- Wide selection of plug-in font cartridges
- Print speed max: 240 cps draft/ 80 cps memo/40 max cps near letter quality
- Bitmap graphics from sixel protocol
- Uni-directional tractors (standard)
- Foreign character sets
- High reliability
- Low cost options available including, parallel interface and bi-directional tractor
- Wide carriage

Dimensions and Weight:

Height:	5″	(127 mm)
Width:	21.5″	(546 mm)
Depth:	13.5″	(343 mm)
Weight:	25 lbs	(11.3 kg)

LA210 Bi-directional Tractor Feed

Additional flexibility for your letter printer

This bi-directional unit offers the additional advantage of enabling you to subscript or carry out multi-column printing and full page reverse.

LA210 Starter Kit

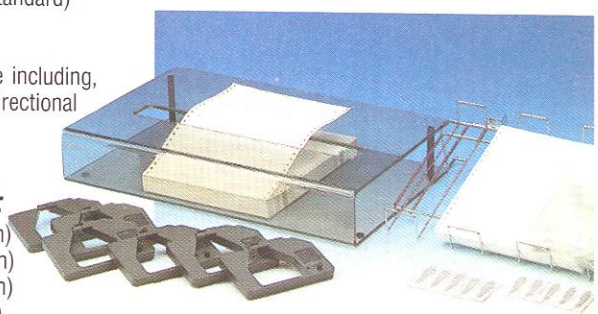
Chosen to give you just what you need with your new LA210

When ordering your LA210, it will save you time and money if you order this starter kit too.

Everything you need for immediate use plus items to ensure continued optimum performance.

Each kit contains:

- 1 Box of 6 Ribbons
- 1 Minipack Word Processing Paper $9\frac{1}{2}$″ × 11″ – 250 sheets
- 1 Minipack Word Processing Paper $9\frac{1}{2}$″ × 12″ – 250 sheets
- 1 Paper Basket
- 1 Dust Cover
- 1 Platen Cleaner Kit
- 1 Deskstand



LA210 Accessories and Supplies

A range of additional equipment, accessories and supplies are available to enhance your new printer.

Paper **Pages 112/113**
Top quality fanfold or cut sheet

Ribbons **Pages 110/111**
Specially selected to give the best results

Font Cartridges **Page 103**
A great choice of typeface styles

Stands **Pages 96/98**
Move your printer just where you want it

Acoustic Covers **Page 95**
Peace and quiet

Paper Tray **Page 98**
Inexpensive device for neatly stacked printouts

Cables and Connections **Pages 62/63**
See configuration guides for your requirements

Part No.		Description	Price £
LA210-AE	C	Letterprinter 210 RO Terminal	1268.00
DL-LA210-AE	C	**Special price** (for quantities of 25 or more LA210-AE, or if ordering with system)	1189.00
LA10X-LH		External Parallel Interface with IBM compatibility (includes IBM Line Drawing ROM Cartridge)	99.40
E0-LA21X-ST		LA210 Starter Kit	120.80
LA21X-BT	C	Bi-directional Tractor	194.80

Line Printer LG31

The LG31 – Quiet printing for the office or data processing room

With the LG31, Digital's 300 lines per minute printer, you can carry out line printing in either the office or data processing room because the LG31 is built for both.

It's fast enough to print 300 lines per minute and tough enough to print 25,000 pages-per-month. Yet it's quiet enough to locate next to your desk, and simple enough to avoid frequent operator attention. The LG31 gives maximum flexibility in a Local Area Network.

In the office, the LG31 simplifies everyone's life. Users sharing distributed systems can retrieve their own output – immediately. Meanwhile, data-processing managers gain extra floor space and improved operator productivity.

The LG31's design allows for dependable operation and with long-life consumables, a very low cost of ownership. In a single product offering, the LG31 offers considerable functionality including text, graphics, bar code and OCR printing.

New lower prices

See pricing panel and take advantage of our special prices when ordering your LG31.

The LG31 provides an upgrade path for heavy users of dot matrix printers such as the LA210 and LA120.

Features

- Quiet operation (<55 dB) for use in open office environment
- Print volume typically 25,000 pages-per-month
- Data processing of 300 lines per minute in uppercase and 240 lines per minute in uppercase/lowercase
- NLQ of 82 lines per minute in uppercase and 65 lines per minute in uppercase/lowercase
- Compressed or expanded print, underlining, bolding, subscript, superscript
- Continuous fanfold paper and multipart forms (1-6 parts) up to 16 inches in width, 22 inches in length
- 7- or 8- bit character sets - DEC Multinational and NCR – OCR-A and OCR-B
- Prints up to 220 columns per line at max. CPI of 16.7
- Sixel graphics processing, horizontal and vertical vector drawing
- Eleven Bar codes; interleaved 2 of 5, Code 39, EAN-8, EAN-13, Code 11, Codebar A/N, B/N, C/*, D/E, UPC-A, UPC-E
- RS232-C serial interface for direct connection to host or via a terminal server
- 50 million character long-life cartridge, 'clean-hands' ribbon

Dimensions and Weight:

Height:	48″	(1230 mm)
Width:	29″	(737 mm)
Depth:	40.6″	(1041 mm)
Weight:	287 lbs	(131 kg)

LG31 Accessories and Supplies

A wide range of additional equipment, accessories and supplies carefully designed to help you get the best performance from your LG31.

Paper **Pages 112/113**
You'll get best results with our paper

Ribbons **Pages 110/111**
Selected to give the best print

Part No.		Description	Price £
LG31-A3	ⓘ D	300 lpm Text and Graphic Printer	6035.00
DL-LG31-A3	ⓘ D	**Special Price** (for quantities of 5 or more LG31-A3, or if ordering with DECserver 250 or system)	5653.00
LGK31-AE		LG31 Country Kit	127.50

Line Printers LG01 and LG02

Line Matrix brings a new standard of reliability

The 600 lines per minute line matrix printers are more reliable than conventional impact printers because they're different. No metal to metal contact points, no wear . . . a linear motor drives a simple shuttle and hammer mechanism. A technology that delivers results and reduces costly service calls.

The LG01 is perfect for text data processing or correspondence and has a capacity of up to 50,000 pages-per-month.

The LG02 has the same capacity as the LG01 but provides text, graphics and barcode printing as well as sophisticated print formatting and creation capabilities.

The LG01 and LG02 printers handle a full range of continuous fanfold paper forms; quietly, reliably, with high precision at variable speeds, and are available with both parallel and serial versions.

New lower prices

See pricing panel and take advantage of our special prices when ordering your LG01 or LG02.

A fibre optic long-line option (LLF01-B) for remote operation of up to 500 metres is available for parallel variants.

Features of the LG01 Text Printer

- Data processing mode printing
- Correspondence mode printing
- Compressed print (at 15 cpi) or expanded print
- 7 or 8 bit character sets
  - DEC multinational
  - OCR-A and OCR-B
- Multipart (1-6) forms handling
- Serial or parallel interface options available

Features of the LG02 Text and Graphics Printer

- All LG01 text functionality
- Bar codes – 3 of 9 and INTERLEAVE 2 of 5
- Custom form and logo creation
- Subscript, superscript, underlining, strikethrough, bolding and rotation capabilities
- Sixel protocol processing compatible with graphics terminals such as the VT125 and VT240/241 for business graphics
- High degree of compatibility with the LN03 Laser Printer
- Both serial and parallel interfaces supported

Dimensions and Weight:

Height:	38.5″	(978 mm)
Width:	33.5″	(851 mm)
Depth:	22.5″	(572 mm)
Weight:	350 lbs	(157.5 kg)

LG01/LG02 Accessories and Supplies

Top quality accessories and supplies to complement your new LG01/LG02.

Paper **Pages 112/113**
The best quality fanfold paper

Ribbons **Pages 110/111**
Always keep a spare handy

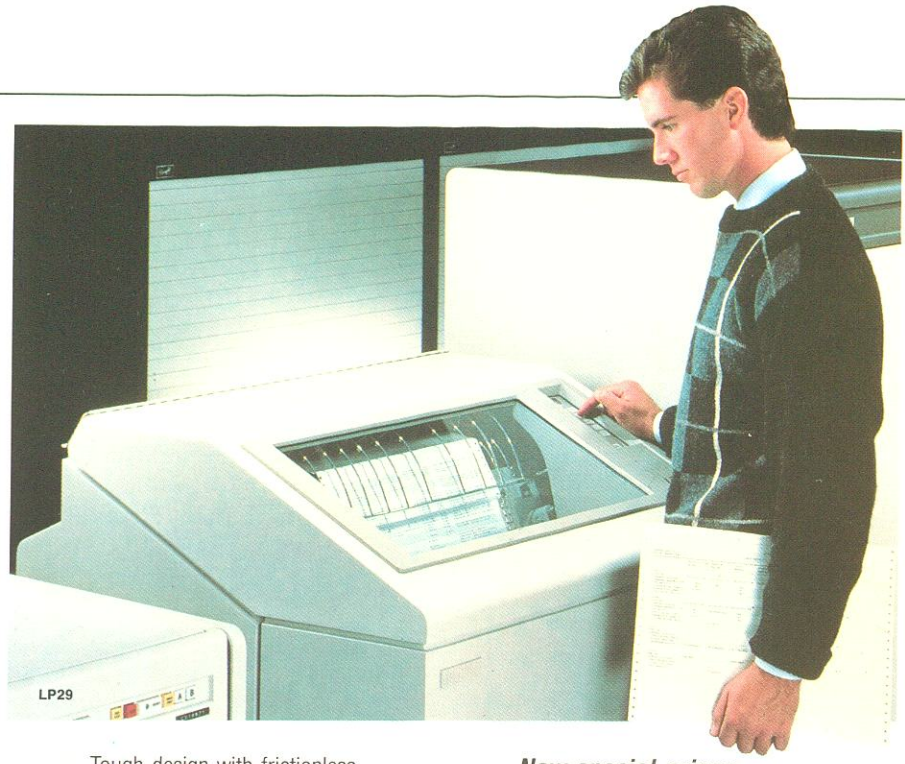
Cables and Connections **Pages 62/63**
See configuration guides for your requirements

Part No.		Description	Price £
LG01-DA	ⓘ D	LG01 Text Printer with RS232-C Interface	7990.00
DL-LG01-DA	ⓘ D	**Special Price** (for quantities of 5 or more LG01-DA, or if ordering DECserver 250 or system)	7608.00
LG02-DA	ⓘ D	LG02 Text/Graphics Printer with both RS232-C Serial and Parallel Interface	10840.00
DL-LG02-DA	ⓘ D	**Special Price** (for quantities of 5 or more LG02-DA, or if ordering DECserver 250 or system)	10290.00
BN12A-2E		Power Cord	8.50

Line Printers LP29 and LP37

Volume line printers for open office or computer rooms

Digital's reliable line printers with a high output and low cost of ownership; perfect for fast quality output.



LP37

The 1200 LPM printer that's quiet enough for your office

The excellent performance of the LP37 at speeds of up to 1200 lpm and a print volume of 150,000 pages a month is achieved with a noise level of only 55 dB, so it's quiet enough to use, even in an office environment. Placing your printer in your office can cut out any unnecessary time-consuming trips to retrieve print outs.

LP37 Features

- Up to 1200 LPM
- 55 dB acoustic level
- LN03/LG02 text compatibility
- 150,000 pages-per-month output
- Powered paper stacker
- One to six part forms
- High reliability and long life consumables
- Low maintenance self-test diagnosis
- Tough design with frictionless hammerbank and heavy duty handling system
- Characters-per-line: 132 at 10 characters per inch
- Vertical spacing: 6 or 8 lines/in, switch selectable
- Prints on continuous paper and multi-part forms
- Supported on UNIBUS, Q-bus and BI bus machines
- Standard powered stacker that accommodates up to one box of paper

New special prices

See pricing panel for details.

DECserver 250 introduces network solution

The DECserver 250 is a network server totally dedicated to printers and provides the ideal connection for your LP29 or LP37 onto a Digital network. See page 42.

LP29 and LP37 Accessories and Supplies

Digital supplies ensure best quality printing.

Paper **Pages 112/113**
The best quality for fanfold paper

Ribbons **Pages 110/111**
Always keep a spare handy

Printbands **Page 109**
A style to suit your needs

Cables and Connections **Pages 62/63**
See configuration guides for your requirements

LP29

Heavy duty 2,000 lpm printer

The LP29 is Digital's fastest impact printer, and is the only line printer capable of printing at speeds up to 2,000 lines-per-minute with Digital systems. The LP29 is designed for data-processing applications that require very high volume output – it has the capacity to print 300,000 pages-per-month.

What makes the LP29 so fast is an optimised 64-character band and a unique Digital parallel interface which allows the LP29 to receive and print data simultaneously.

LP29 Features

- Up to 2,000 lines-per-minute with Digital systems
- Up to 300,000 pages-per-month

Part No.		*Description*	*Price £*
LP29-S3	i D	LP29 Line Printer with Controller for MicroVAX 3000 series, with 30′ Printer Cable	24440.00
DL-LP29-S3	i D	**Special Price** (for quantities of 5 or more LP29-S3, or if ordering with DECserver 250 or system)	23160.00
LP29-V3	i D	LP29 Line Printer with 30′ Printer Cable	24440.00
DL-LP29-V3	i D	**Special Price** (for quantities of 5 or more LP29-V3, or if ordering with DECserver 250 or system)	23160.00
LP37-S3	i D	LP37 Line Printer with Controller for MicroVAX 3000 series, with 30′ Printer Cable	12540.00
DL-LP37-S3	i D	**Special Price** (for quantities of 5 or more LP37-S3, or if ordering with DECserver 250 or system)	11860.00
LP37-V3	i D	LP37 Line Printer with no Controller, with 30′ Printer Cable	12540.00
DL-LP37-V3	i D	**Special Price** (for quantities of 5 or more LP37-V3, or if ordering with DECserver 250 or system)	11860.00
LP29-KE		Country Kit	1063.00
LP37K-AE		Country Kit	1063.00

Section Index

95	Acoustic Covers
103	Bar Code Font
96	Bulk Packs
116/117	Cleaning Products
102	DEClaser Supplies
119	Disk Cartridges
121	Disk Packs
118/120	Diskette Storage Boxes
98	Dust Covers
118	Floppy Disks
103/105	Font Cartridges
114	Ink Cartridges
118	Keyboxes
112/113	Labels
120	Magnetic Tapes
114/115	Maintenance Products
102, 108	Memory Boards
120	Optical Cartridge
112/113	Paper
98	Paper Catcher and Trays
108	Personalised Fonts
96/99	Printer Stands
106/107	Printwheels
109	Printbands
110/111	Ribbons
116	Software Documentation Kits
100/101	Terminal Accessories
121	TK Tape Storage Boxes
112/113	Transparencies

Viewpoint

With this issue, you will find our new Supplies Supplement exclusively for Accessories, Supplies and Magnetic Media. Many customers who are interested only in these products, are not necessarily concerned with other items in DECdirect. So now there's a special supplement just for this purpose. Please hand it to the person in your organisation who is most likely to find it useful.

Digital's commitment to both the environment and you, our customers, has in past issues of this catalogue, meant the withdrawal of certain cleaning products.

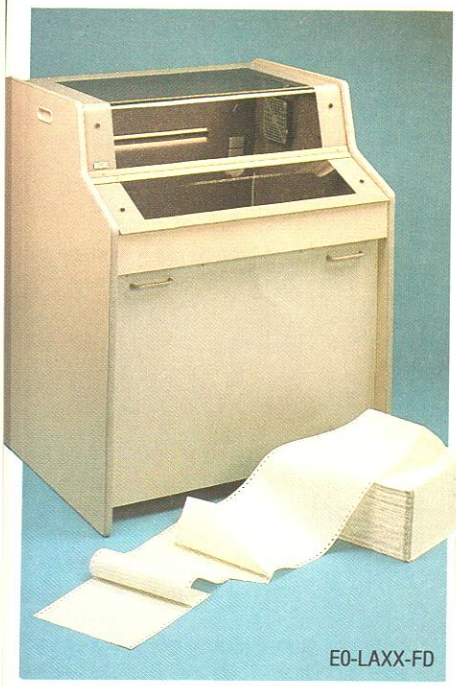
In this edition, I am pleased to introduce a new range of floppy disk drive cleaning kits, that are CFC free and disk drive friendly. Three cleaners, (RXA8K-HC, RXA5K-HC and RXA3K-HC) have been introduced, one for each of our 8″, 5¼″ and 3½″ diskette drives.

Finally I hope that you will take a few minutes to discover the NEW products I have introduced in this edition of the catalogue.

Yours sincerely

Annette Hornby

Merchandising Product Manager
Accessories and Supplies


E0-LAXX-FD

E0-LA70X-AC

E0-LQP20-FJ

E0-LA75X-AC

E0-LA24X-AC

Acoustic Covers

Up to 90% noise reduction

Our range of acoustic covers not only reduces printer noise by as much as 90%, creating a better and more productive working environment, but also protects your printer from dirt and dust.

LA70 and LA75 Acoustic Covers

These sleek new acoustic covers for the LA70 and LA75 come complete with deskstand and paper catchers. Both sit neatly on your desk and keep your paper tidy.

These covers are not suitable for use with a sheet feeder.

Acoustic Cover for LA324 and LA210

Smooth paper feed and a quiet office

A revolution in acoustic covers and designed specifically for the LA324 and LA210 printers.

This compact stylish acoustic cover allows rear snag-free paper feed into your LA324 and bottom feed into your LA210; completely eliminating the need for a paper matic device. This cover is most effective when used with the integral acoustic cover stand (E0-STAND-01 illustrated).

DIMENSIONS (mm)	INTERNAL				EXTERNAL				PAPER CATCHER	
MODEL	H min	H max	W	D	H min	H max	W	D	W	D
E0-LAXX-FD	–	960	710	580	–	980	780	700	–	–
E0-LA24X-AC	190	250	690	440	230	310	750	500	–	–
E0-LQP20-FJ	–	480	620	620	–	520	710	680	–	–
E0-LA70X-AC	110	155	440	310	190	270	513	440	483	320
E0-LA75X-AC	120	185	480	380	240	330	550	500	523	320

Key to printer accessories

P Paper catcher
A Acoustic cover stand
S Sheet Feeder
F Forms tractor
IC Papercatcher included
ID Deskstand included

Acoustic Cover		Printer Type: LA70	LA75	LA100	LA120	LA324	LQP02	LQP03	LQP25	LQP45	LA210	Price £
E0-LAXX-FD	D	–	–	–	P	–	–	–	–	–	–	679.50
E0-LA24X-AC		–	–	–	–	AF	–	–	–	–	AF	463.60
* E0-LQP20-FJ		–	–	ASF	–	–	–	ASF	ASF	ASF	ASF	538.30
E0-LA70X-AC		ICID	–	–	–	–	–	–	–	–	–	181.20
E0-LA75X-AC		–	ICID	–	–	–	–	–	–	–	–	249.20
In order for this acoustic cover to be used with continuous form paper, it should be fitted with a papermatic device. E0-ACAPM-01.												181.20

Buyers Guide

How to select your Acoustic Cover

This chart lists the full range of acoustic covers and details which printers, and printer accessories, they can be used with.

Universal Printer Stand

Add mobility to your printer

A universal stand to hold all desktop printers.

In any busy office it's often an advantage to move the printer to a more convenient position. That's no problem with this stand – locking castors provide all the stability you need for printing, plus quick and easy mobility when you need to move the printer around the office.

Comes complete with paper catcher and is suitable for both bottom and rear paper feeds.

Dimensions:

	Stand	Table Top
Height:	28.2″ (716 mm)	
Width:	24.2″ (614 mm)	23.6″ (600 mm)
Depth:	22.6″ (576 mm)	14.2″ (360 mm)

Part No.	Description	Price £
E0-STAND-02	Universal Printer Stand	145.00

Guide to installation symbols

- I — *Free installation by Digital*
- C — *Designed to be installed by customers*
- O — *Designed to be installed by customers Free assistance given if required*

Universal Integral Acoustic Cover Stand

Locking castors for stability and manoeuvrability

This stand has been specifically designed to accommodate both your Digital printer and acoustic cover. Perfect for your new LA324 and universally suited to all Digital acoustic covers.

Fitted with locking castors, you can simply wheel the stand to the most convenient position, then lock the stand to keep it perfectly rigid for use.

Comes with paper catcher and is suitable for both bottom and rear paper feeds.

Part No.	Description	Price £
E0-STAND-01	Integral Acoustic Cover Stand	124.60

Bulk Packs

The economic way to order your Digital Accessories & Supplies

Buying Bulk Packs means better stock level, therefore you're less likely to run out of essential items, and of course, its most cost effective.

Part No.	Description	Price £
Ribbons & Cartridges – See Pages 110/111		
E0-LA50R-1D	12 × E0-LA50R-06, LA50/LA75 **save 20%**	209.90
E0-LA50R-1L	26 × E0-LA50R-06, LA50/LA75 **save 25%**	427.30
E0-LA70R-1D	12 × E0-LA70R-06, LA70 **save 15%**	210.70
E0-LA10R-1D	12 × E0-LA10R-06, LA34/LA38/ LA100/LA210 **save 12%**	353.00
E0-LA10R-1L	24 × E0-LA10R-06, LA34/LA38/ LA100/LA210 **save 20%**	640.80
E0-LA24R-1D	12 × E0-LA24R-KA, LA324 **save 15%**	531.50
E0-LGXXR-1L	5 × LGXXR-04, LG01,LG02 **save 15%**	469.80
E0-LGR31-1L	6 × LGR31-01, LG31 **save 15%**	259.20
E0-LQP25-1L	12 × E0-LQP25-KA, LQP45 **save 24%**	117.00
LN03 Kits – See Pages 114/115		
E0-LN03X-1D	6 × LN03X-AD, User Maintenance Kits **save 10%**	770.10
E0-LN03X-1L	12 × E0-LN03X-AC, Toner Cartridge Kits **save 26%**	528.50
Disks, Tapes & Cartridges – See Pages 118/121		
*E0-RX50K-1L	10 × E0-RX50K-10, 5¼″ RX50 Floppy **save 22%**	155.80
*E0-RX33K-1L	10 × E0-RX33K-10, 5½″ RX33 Floppy **save 21%**	173.70
E0-RX23K-1L	10 × E0-RX23K-10, 3¼″ RX23 Floppy **save 15%**	205.40
E0-RV02K-1D	10 × RV02K-01, 2 Gb Media Cartridge **save 12%**	2643.00
E0-TUN06-SL	10 × E0-TUN06-S, 600′ Tape **save 11%**	107.20
E0-TUN12-SL	10 × E0-TUN12-S, 1200′ Tape **save 10%**	143.50
E0-TUN24-SL	10 × E0-TUN24-S, 2400′ Tape **save 20%**	169.10
E0-TUN24-SA	50 × E0-TUN24-S, 2400′ Tape **save 25%**	792.80
E0-TUN24-SB	100 × E0-TUN24-S, 2400′ Tape **save 30%**	1480.00
E0-TK50K-1L	50 × E0-TK50-K, 600′ ×½″ 95 Mb Tape **save 20%**	875.80
E0-TK52K-1L	50 × E0-TK52-K, 600′ ×½″ 300 Mb Tape **save 20%**	1359.00
E0-TA90K-1C	(180) 6 × E0-TA90K-30 ½″ 200 Mb Cartridge **save 10%**	1019.00
E0-TA90K-1D	(360) 12 × E0-TA90K-30 ½″ 200 Mb Cartridge **save 20%**	1812.00
E0-TA90K-1L	(720) 24 × E0-TA90K-30 ½″ 200 Mb Cartridge **save 35%**	2945.00

* Re-usable library cases included

Laser Table

A useful table stand for the DEClasers, LN03 and Laserfeeder

The Laser Table will help you with good office organisation. This effective table is ideal for the new DEClaser printers and the LN03 when used with the LN03 Laserfeeder.

The table is equipped with castors for inter-office manoeuvrability and a large lockable cupboard for secure storage of paper and other consumables. The open shelf will also prove very useful in maintaining a neat printer facility.

Dimensions:

Height: 24.4″ (620 mm)
Width: 35.8″ (910 mm)
Depth: 20.1″ (510 mm)

Part No.	*Description*	*Price £*
E0-STAND-03	Laser Table	218.20

LN03 Laserfeeder

Now your LN03 can mix paper types and handle longer print runs

The Laserfeeder sheet feeder means greater paper feeding functionality for your LN03 or LN03 PLUS.

The Laserfeeder is ideal for desktop word processing applications. It has three paper bins which enable three separate sources of paper to be accessed. For correspondence printing, for example, you can use headed paper, continuation sheets and paper for file copies. Alternatively, using the special mode for long print runs, the same paper can be accessed from all three bins, increasing the LN03s paper capacity from 250 to over 600 sheets.

The Laserfeeder is very easy to use and doesn't require any special software. Different paper types can easily be selected by including Paper Flow Control (PFC) commands within the text. The Laserfeeder will interpret those commands, which do not appear on the printed copy, and activate the appropriate paper bin.

Installation is easy too; the Laserfeeder fits as a simple substitution for the existing paper tray and takes its power supply from the LN03.

The perfect stand for the LN03 and Laserfeeder is the Laser Table – see above.

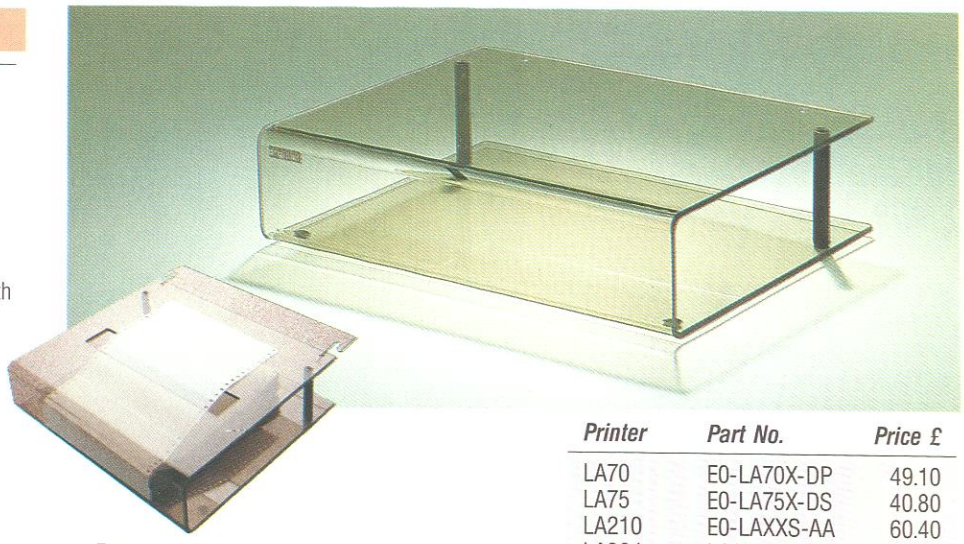
Part No.	*Description*	*Price £*
LN03X-SF C	Sheet Feeder for LN03/LN03S	1030.00

Desktop Printer Stands

Keeps your printer to hand and your desk tidy

The ideal stands for your desktop printer. Made from durable lightweight acrylic, they fit snugly onto any desk, with your paper stacked inside.

The new LA70 stand, designed to match our current range of deskstands, is made of sturdy acrylic. It comes complete with paper catcher to add practicality to good looks.



Dimensions:

LA70 Stand

Height:	3.9″	(100 mm)
Width:	15.6″	(395 mm)
Depth:	12″	(305 mm)

Paper catcher

Width:	11″	(280 mm)
Depth:	14.8″	(375 mm)

Printer	*Part No.*	*Price £*
LA70	E0-LA70X-DP	49.10
LA75	E0-LA75X-DS	40.80
LA210	E0-LAXXS-AA	60.40
LA324	LA24X-DS	54.90
LJ250	E0-LJ25X-DS	46.80
LVP16	E0-LAXXS-AA	60.40

Dust Covers

Make sure your terminals and printers are protected against harmful dirt

Digital's dust covers are made of high quality, durable, anti-static, clear vinyl material. The custom-fit design of each cover helps protect your hardware, when not in use, from harmful dirt build-up. The covers are easily cleaned by wiping them with a damp cloth. Dust cover sets for terminals contain monitor and keyboard covers.

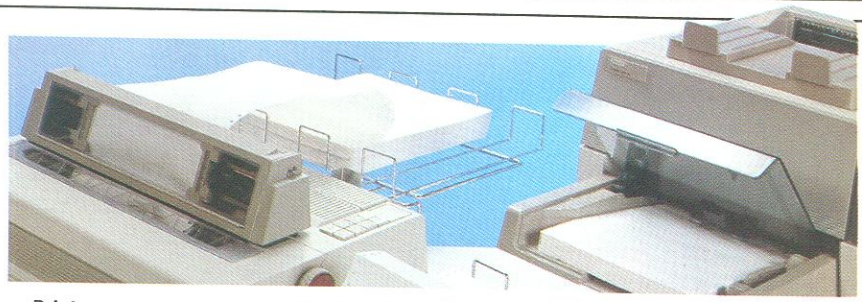
Part No.	*Description*	*Price £*
E0-LA70X-DC	Dust Cover for LA70 Printer	9.80
E0-LJ25X-DC	Dust Cover for LJ250 Printer	9.80
VT3XX-DA	Dust Cover for VT320 Terminal	9.80
VT3XX-DB	Dust Cover for VT330 Terminal	9.80
VT3XX-DC	Dust Cover for VT340 Terminal	9.80

Paper Catchers and Trays

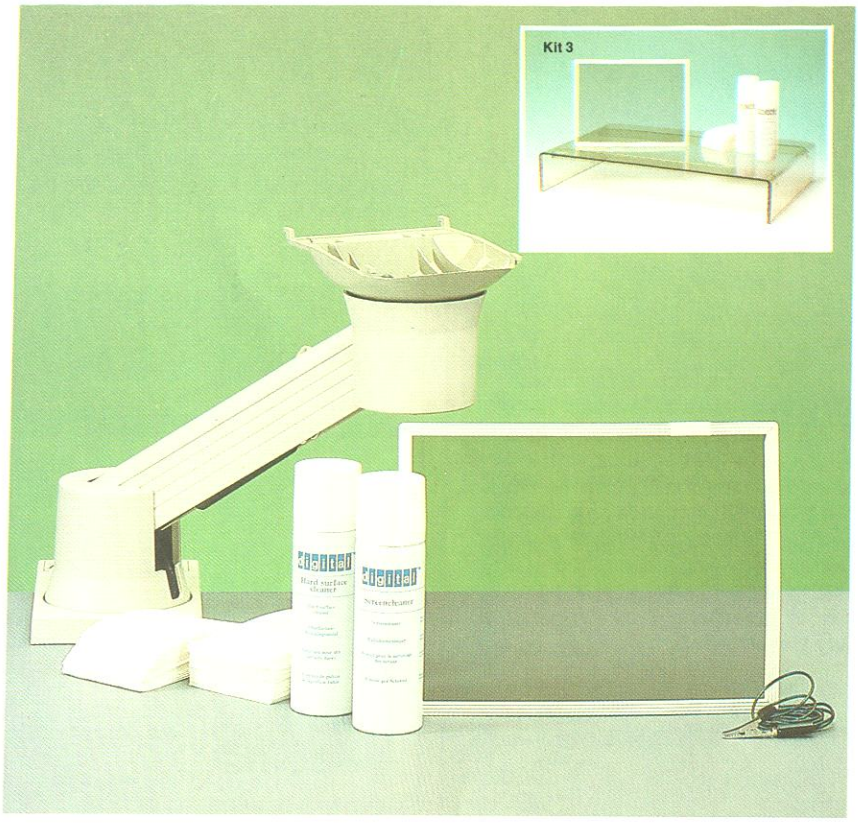
Keep your paper neatly organised

Easily fitted to your printer, the paper catcher neatly collects your printed output. It will automatically fold and stack fanfold paper as it prints.

Auxiliary paper trays have been designed specially for the LN03, PrintServer 20 and PrintServer 40 Plus printers to allow different pre-printed forms to be stored in separate trays.



Printer	*Part No.*	*Description*	*Price £*
LA75	E0-LA50X-FF	Paper Catcher	12.80
LA120	LAXX-NC	Paper Catcher	29.80
LA210	E0-LA21X-SW	Paper Tray	29.80
LJ250	E0-LJ25X-SW	Paper Catcher	17.80
LN03	E0-PTRAY-03	Auxiliary Paper Tray	28.70
LPS40/20	LPS4X-BA	A4 Auxiliary Paper Tray	84.10
LPS40/20	LPS4X-BB	A3 Auxiliary Paper Tray	109.70



Promotion Kits for VT320 and VT420 Terminals

Improve your workstation area and save money

Two promotion kits for the popular VT320 and VT420 terminals, give you a better working environment and at a lower cost when compared with ordering each item separately. There are two kits to choose from, each contains a workstation cleaner which has been specially formulated for keeping computer equipment looking like new and a screen filter (with grounding wire) to make working at your VDU more comfortable by reducing glare, which can cause eye strain. The kits also include either a short reach monitor arm, so you can position your VDU just where you want it – and out of the way to free your desk – or a deskstand that's designed to give you maximum free desk space.

Promotion kit E0-VT3XX-P2 contains:

- Workstation Cleaner (E0-VT3XX-KF)
- Screen Filter (E0-VT3XX-FA)
- Universal Monitor Arm (E0-VT4XX-MA)

Promotion kit E0-VT3XX-P3 contains:

- Workstation Cleaner (E0-VT3XX-KF)
- Screen Filter (E0-VT3XX-FA)
- Desk Stand (E0-VT3XX-DS)

VT220 Terminal Users

If you have VT220 terminals you can purchase any of these kits with the addition of an E0-VT2XX-FA screen filter, and the package is still considerably a better buy than purchasing items individually.

The spare VT320 screen filters can then be used when you upgrade your system to VT320s/ VT420s.

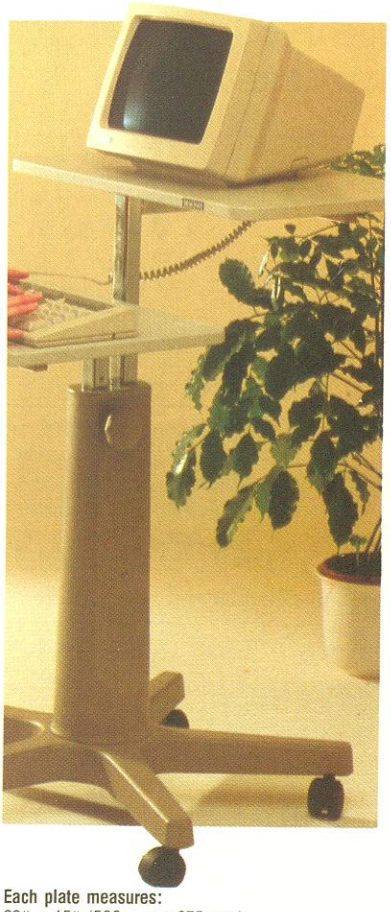
Part No.	*Description*		*Price £*
E0-VT3XX-P2	Monitor Arm Promotion Pack	**save 22%**	132.10
E0-VT3XX-P3	Desk Stand Promotion Pack	**save 34%**	61.90

Mobile Terminal Table

A movable workstation that puts your terminal close at hand and keeps your desk free

This terminal table is the ideal companion for any of our VT200/VT300 family of terminals or the DECmate III. The two separate plates adjust independently to the height that suits you, whether you are standing or sitting.

So you will always find the right position to avoid back and neck strain, and you will have the advantage of having your desk clear of computer equipment.

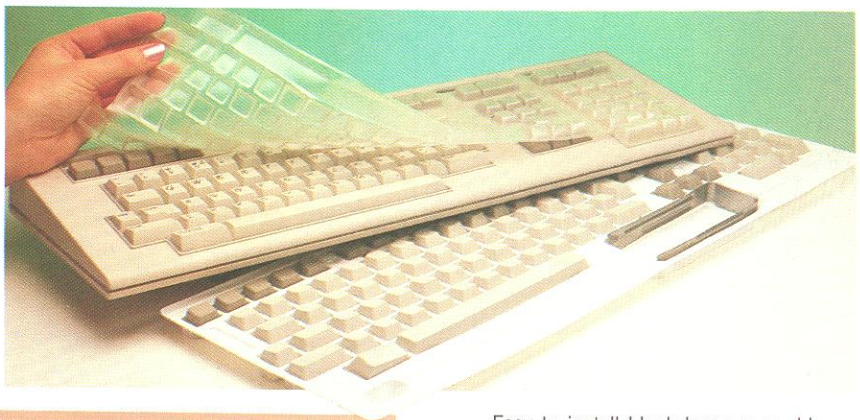


Each plate measures:
23″ x 15″ (580 mm x 375 mm)

Adjustable Height:
26″ – 39″ (670 mm – 990 mm)

Weight Loading:
Keyboard plate 17.5 lbs (8 kg)
Monitor plate 70 lbs (32 kg)

Part No.	*Description*	*Price £*
E0-TABLE-04	Terminal Table	283.10



Keycaps and Overlays

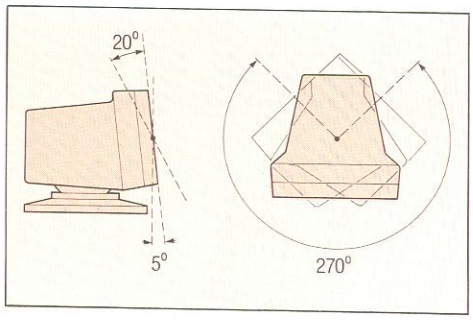
Keycaps personalise your keyboard for your own requirements and overlays keep your keyboard clean

Easy to install blank keycaps enable you to customise your keyboard to meet special software requirements. Designed for use with VT200, VT300 and PC series. Plus our latest additions for the new LK401/402 keyboards used with the VT420, VT1200 and VT1300 terminals. Clear overlays simply fit over your existing keyboard, ideal when being used by a number of operators or in a dirty environment.

Part No.	Description	Price £
For VT200, VT300 and PC series		
LK201-KC	Clear Overlays, full keyboard – blank (box of 10)	58.70
LK201-KJ	Keycaps, full set – blank (set of 105)	58.70
For VT420, VT1200, VT1300 and LK401/402 Keyboards		
LK4XX-KC	Clear Overlays, full keyboard – blank (box of 10)	57.20
LK4XX-KD	Clear Overlays, numeric keyboard – blank (box of 15)	33.40
LK4XX-KH	Keypad Overlays, numeric – KED/EDT (box of 10)	41.30
LK4XX-KJ	Keycaps, full set – blank (set of 110)	57.20

Tilt/Swivel Base

Tilts your VDU to avoid reflection and make viewing more comfortable



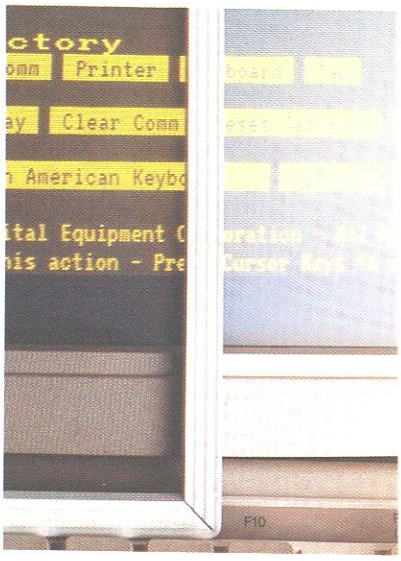
The tilt/swivel base is simple to attach to your video terminal. It is designed to allow you to adjust the viewing height and angle so you can position the monitor exactly where you want; to reduce glare, relieve muscle tension and increase your working comfort.

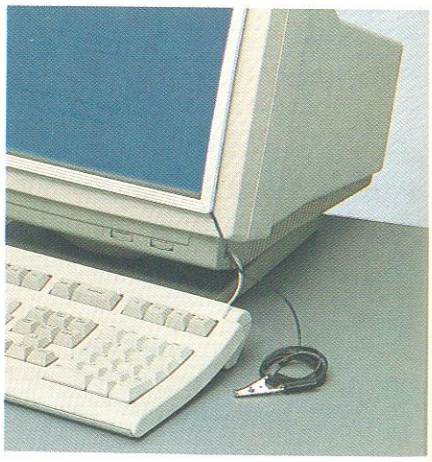
Part No.	Description	Price £
VT3XX-CA	Tilt/Swivel Base for VT320	15.90

Screen Filters

Reduces glare and improves contrast

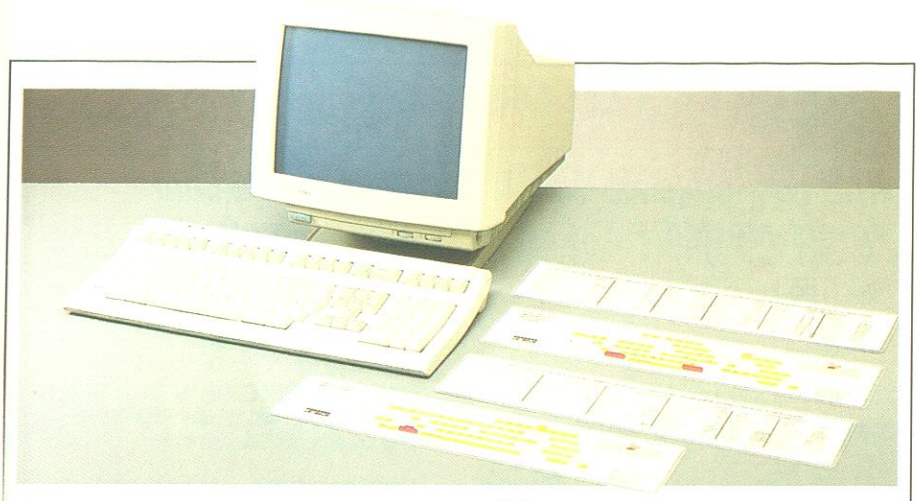
The Digital screen filter makes working with your monitor more comfortable by improving display readability, reducing glare and improving both contrast and resolution.





Both these popular screen filters now come complete with grounding wire for users who are sensitive to static electricity.

Part No.	Description	Price £
E0-VT2XX-FA	Screen Filter for VT200, DECmates, Pro and Rainbow 12"	34.00
E0-VT3XX-FA	Screen Filter for VT320 and VT420	37.80



IBM Keyboard Template (New)

Speed up your word processing

These new templates simply rest at the top of your keyboard and allow quick easy access to WPS-PLUS/DOS commands when using non-Digital keyboards.

Three different sets are available to cover the various types of IBM/IBM compatible keyboards. The templates are made from a practical, durable plastic laminate 18″ long and 3½″ wide, and are supplied in packs of 5 of each type.

On one side of each template is a keyboard diagram indicating the functions of each key. On the reverse side is an alphabetical listing of the commands and keystrokes needed to execute the commands.

If you're using non-Digital keyboards, these simple devices will speed up and simplify your word processing.

Part No.	Description	Price £
LKWPS-AA	WPS/PLUS Template for Enhanced Keyboard (pack of 5)	49.30
LKWPS-AB	WPS/PLUS Template for AT Keyboard (pack of 5)	49.30
LKWPS-AC	WPS/PLUS Template for XT Keyboard (pack of 5)	49.30
LKWPS-AD	Mixed pack, 2 of each LKWPS-AA/AB/AC	49.30

Universal Monitor Arm

Your monitor just where you want it – or extra desk space

Now you can position your terminal exactly where you want it, the right height, the right angle. Reduces eye fatigue and back strain and makes for a more relaxing working day.

This monitor arm with its compact 16″ reach, needs just fingertip control to swivel and move into position or swing out of the way. Installing and adjusting the monitor arm is simplicity itself. A universal clamp is provided for quick and straightforward fixing to desk or work surface. Different weight monitors can all be catered for, the gas strut's pressure can be easily adjusted so the balance is just right.

Your terminal just where you want it and your desk free in seconds when you need the room.

Suitable for VT220, VT320 and VT420 terminals.

Part No.	Description	Price £
E0-VT4XX-MA	Universal Monitor Arm Short Reach	117.00

Desk Stand for Terminals

Space saver that's easy on the eyes

A neat and attractive terminal stand that occupies a minimum of desk space. Clever design allows keyboard to be stored underneath stand when not in use and positions terminal at eye level for comfortable working.

Dimensions:

Height:	4″	(100 mm)
Width:	23″	(580 mm)
Depth:	14″	(340 mm)

Part No.	Description	Price £
E0-VT3XX-DS	Desk Stand	41.50

Mouse Mat

Move your mouse with ease and precision

The Digital mouse mat gives much better control because it allows you to move the mouse quickly and easily just where you want it. The mat also keeps the mouse and drive roller clean for continued ease of control and reliability.

Made of rubber with a special nylon coating to give optimum friction between mouse and mat and to eliminate unwanted slipping.

Dimensions:

9″ × 11″ × 5/16″
(230 × 270 × 8 mm).

Part No.	Description	Price £
E0-VSXXX-01	Mouse Mat	8.30

DEClaser Supplies

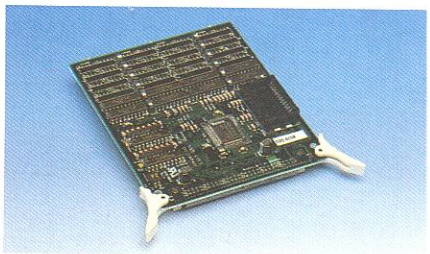
Make the best use of your new DEClaser printer

Having chosen the new DEClaser printer (a good choice!) you want to get the very best use for your kind of work. Here are a few specially designed options to help you achieve just that.

Memory Cards

Quick plug-in extra memory

These memory cards simply plug into the side of your DEClaser leaving the front font cartridges, access free. These memory cards are available as 1, 2 or 3 Mb.



CaPSL Cartridge

Canon Compatible

Simple, plug-in cartridge gives your DEClaser printer all the benefits of Canon compatibility.

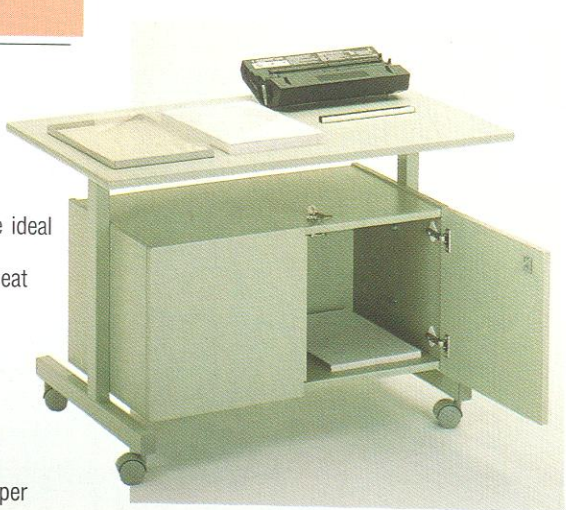
Promotion Kit

The kit that even includes a printer stand

This kit's got the lot and it's the ideal way to get started. Toner, labels, transparencies, paper and even a neat table stand.

Each kit contains:

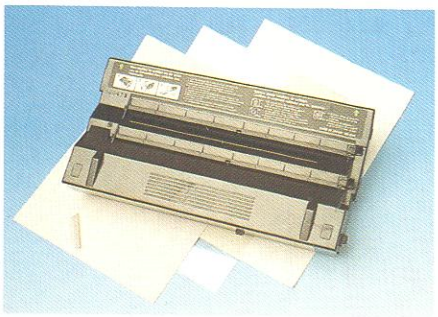
- 1 Laser Table
- 1 Supplies Cartridge
- 1 Box of Labels (21 per sheet)
- 1 Box of Transparencies
- 1 Minipack of A4 Cut Sheet Paper



Starter Kit *New*

The cost-effective way to get started

This is the low cost way to get started; everything you need for your new DEClaser printer. Labels, transparencies, paper and supplies cartridges for essential maintenance.



Each kit contains:

- 1 Minipack of A4 Cut Sheet Paper
- 1 Box of Labels (14 per sheet)
- 1 Box of Transparencies
- 2 Supplies Cartridges

Paper Cassettes

Instant choice of paper size

Five optional cassettes mean you can simply switch from one paper size to another or change to envelopes. Cassettes hold: legal, A4, letter, envelope and executive.

The envelope cassette can accommodate up to 15 envelopes at any one time.

Font Cartridges

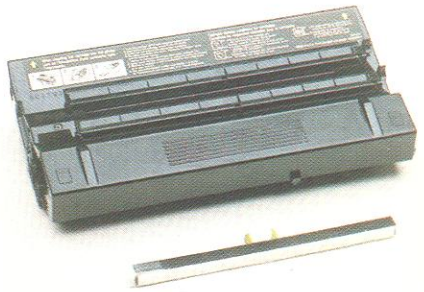
Neat, convenient plug-in fonts

DEClaser font cartridges come in neat convenient credit-card size. Up to two cartridges can be plugged in at any one time. Each cartridge has the latest in letter-quality typestyles and sizes, so you can be more creative with your letters and documents. Choose from:

LNXX-CA C.G. Times Proportional Font Cartridge
8, 10, 12, 14, 18, 24 Point Normal
8, 10, 12 Point Italic
8, 10, 12, 18 Point Bold

LNXX-CB C.G. Triumvirate Proportional Font Cartridge
8, 10, 12, 14, 18, 24 Point Normal
8, 10, 12 Point Italic
8, 10, 12, 18 Point Bold

LNXX-CC ITC Souvenir & Script Proportional Font Cartridge
ITC Souvenir: 8, 10, 12, 14 Point Normal
8, 10, 12 Point Italic
8, 10, 12 Point Bold
English Embassy (Script): 14, 18 Point Normal



Supplies Cartridge

The quick, easy to change supplies kit

One of the benefits of the new DEClaser printers is the ease of maintenance. This has been achieved by the use of this clever single cartridge, that's easy and quick to use and in one operation changes: toner, opc drum, cleaning blade, change roller and residual toner reservoir. Each cartridge prints up to 4000 copies.

Proportional ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Triumvirate ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Gothic ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Elite ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Swiss ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

LNXX-CD Monospaced Font Cartridge
Courier: 10 Point Italic Legal Characters

Elite: 10 Point Italic Legal Characters

Letters Gothic: 10, 14 Point Normal

ASCII, ISO Latin-1, Legal 10, 14 Point Bold
ASCII, ISO Latin-1, Legal

OCR A: 10 Point Normal

OCR B: 10 Point Normal

Monospaced Swiss: 14, 18, 24 Point Normal
18 Bold

Barcode: 3 of 9
18 Point Normal
36 Point Normal with readable characters

Part No.	*Description*	*Price £*
LNXX-AC	Supplies Cartridge Kit (up to 4000 copies)	82.10
E0-LNXX-XA	**Bulk Pack** 4 x LNXX-AC – **save 23%**	253.90
E0-LNXX-XB	**Bulk Pack** 16 x LNXX-AC – **save 29%**	938.40
E0-LNXX-XC	**Bulk Pack** 64 x LNXX-AC – **save 33%**	3533.00
E0-LNXX-PR	Promotion Kit	289.20
E0-LNXX-ST	Starter Kit	179.40
LNXX-CA	CG Times Proportional Font	237.70
LNXX-CB	CG Triumvirate Proportional Font	237.70
LNXX-CC	ITC Souvenir and Script Proportional Font	237.70
LNXX-CD	Monospaced Font	237.70
LNXX-CN	CaPSL Cartridge (Canon compatible)	237.70
LNXX-LA	Paper Cassette – Legal	67.10
LNXX-LB	Paper Cassette – A4	58.70
LNXX-LT	Paper Cassette – Letter	58.70
LNXX-LN	Paper Cassette – Envelope	75.60
LNXX-LE	Paper Cassette – Executive	63.80
LNXX-UC	1 Mb Memory Card without FPU	231.20
LNXX-UD	2 Mb Memory Card with FPU	449.20
LNXX-UE	3 Mb Memory card with FPU	655.50

Font Cartridges

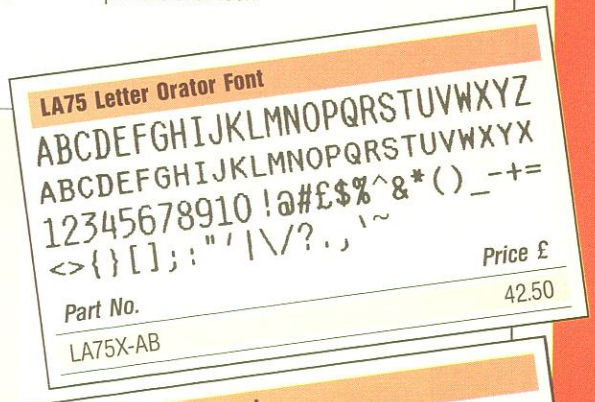
Easily changeable font cartridges – a selection gives you greater flexibility

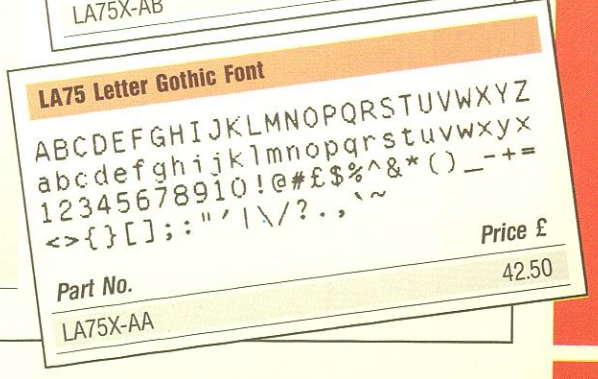
For Digital printers using font cartridges, there is a wide range of typestyles available; those for the LN03 printer are illustrated on pages 104/105. These can be easily and quickly changed, so whatever you are producing, you will have the best typestyle available to suit a particular job.

Correspondence, internal forms and reports can all benefit, and look more effective, by using the most suitable typestyle. Having a selection will enabie you to get the best use from your printer, giving your printed output a more professional look.

Part No.	*Description*	*Price £*
Font Cartridges for the LA100/LA210		
LA10X-AA	Courier 10 240/30 cps	59.60
LA10X-AB	Courier 12 240/30 cps	59.60
LA10X-AC	Gothic 12 240/30 cps	59.60
LA10XAE	Symbols 10 240/30 cps	59.60
LA10X-AF	Gothic 10 240/30 cps	59.60
LA10X-AP	Italics 240/30 cps	59.60
LA10X-AR	DECtech 240/30 cps	59.60
LA10X-JP	VT100-12 240/30 cps	59.60
LA10X-LH	IBM Compatible	99.40
LA324 Font Cartridges		
LA24X-CA	Letter Gothic 10	70.80
LA24X-CB	Orator 10	70.80
LA24X-CC	Prestige Elite 12	70.80
LA24X-CD	IBM OCR-A	70.80
LA24X-CE	IBM OCR-B	70.80
LA24X-CF	IBM Presenter	70.80
LA24X-CG	Digital OCR-A	70.80
LA24X-CH	Digital OCR-B	70.80

Font Cartridges are user installable and boxed singly.





Typefaces
for LN03 Printers

Digital font cartridges and printwheels meet most requirements for today's business communications. All the different typestyles shown here are actual size so you can select those that best suit your needs.

The sample strike-outs illustrate the symbols and punctuation each font contains. Each strike-out shown does not, however, give a definitive illustration of what each font contains. For a comprehensive sample please call Technical Support.

Font Cartridges for the LN03 Printer

English Embassy 18 Bold, 18, 14 Point

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890~`!@#£$%^&*()_-+=[]{}\|":;/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890`~!@#£$%^&*()_-+={}\"':;?/.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890`~!@#£$%^&*()_-+={}\"':;?/.,<>

Part No.	Price £
LN03X-CP	237.70

OCR A/B 12, 10 Point

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890~`!@#$%^&*()_-+=
[]{}\|'";:/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890~`!@#$%^ &*()_-+=
[]{}\|'";:/?.,<>

Part No.	Price £
LN03X-CM	237.70

Letter Gothic 10 Bold, 14, 10 Point

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890~`!@#£$%^&*()_-+
=[]{}\|'";:/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890`~!@#£$%^&*()_-+
={[]}|\"':;?/.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890`~!@#£$%^&*()_-+
={[]}|\"':;?/.,<>

Part No.	Price £
LN03X-CS	237.70

ITC Souvenir
12, 10 Bold, 10 Italic, 12, 10, 8 Point

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
1234567890~`!@#£$%^&*()_-+=[]{}\|'";:/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890~`!@#£$%^&*()_-+=[]{}\|'";:/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890~`!@#£$%^&*()_-+=[]{}\|'";:/?.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890`~!@#£$%^&*()_-+={[]}|\"':;?/.,<>

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890`~!@#£$%^&*()_-+={[]}|\"':;?/.,<>

Part No.	Price £
LN03X-CL	237.70

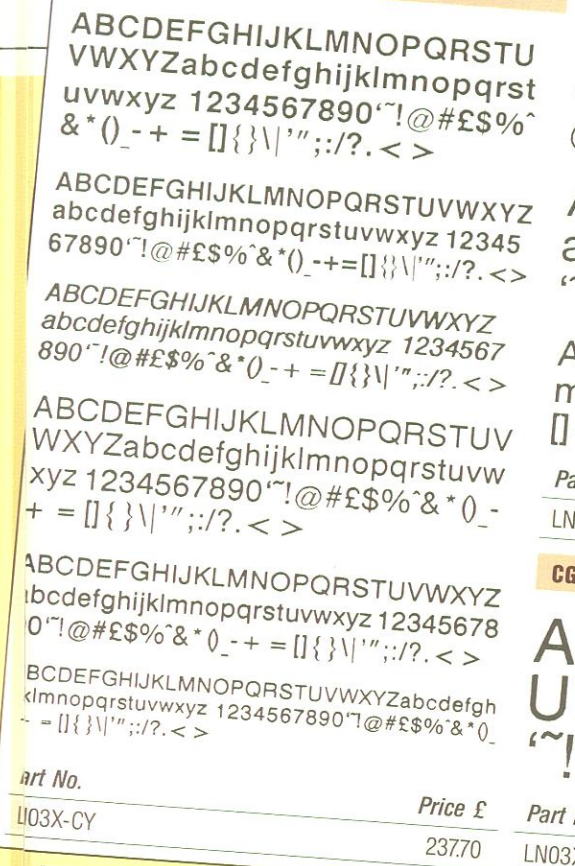
ISO/PC (LN03 PLUS) 10, 8 Point

ABCDEFGHIFKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£$%^&*()-=_+[]
{};'\:"|,./,.?<>`~

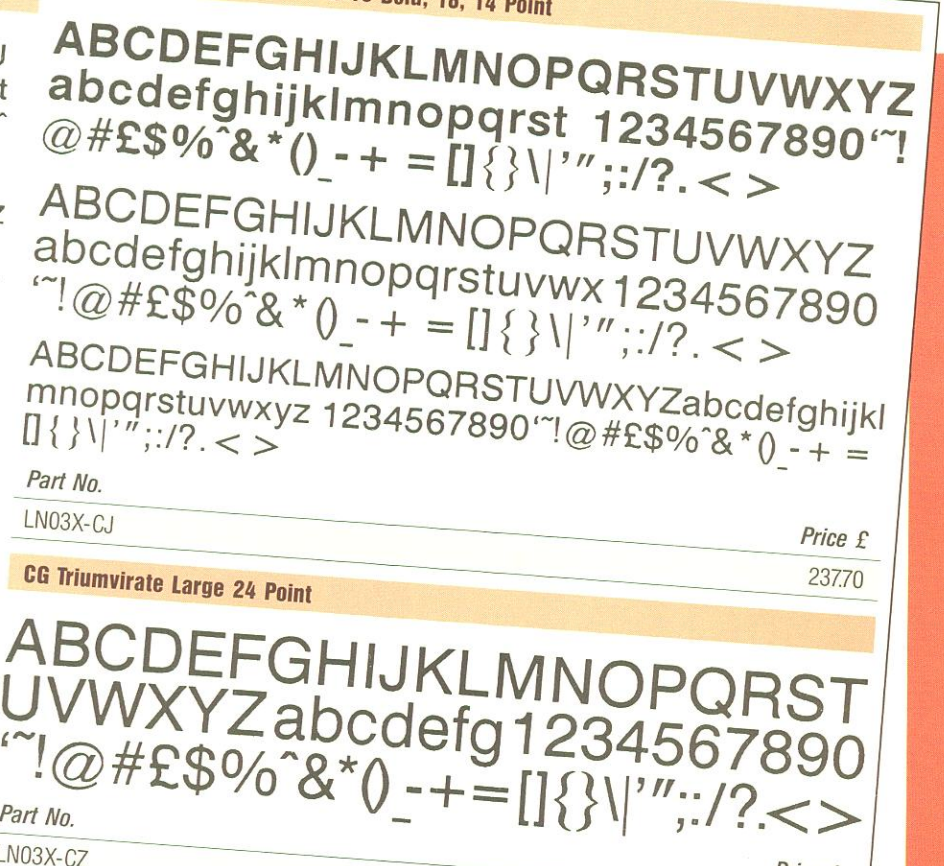
ABCDEFGHIFKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£$%^&*()-=_+[]
{};'\:"|,./,.?<>`~

Part No.	Price £
LN03X-IC	279.70

CG Triumvirate Small
12, 10 Bold, 10 Italic, 12, 10, 8 Point

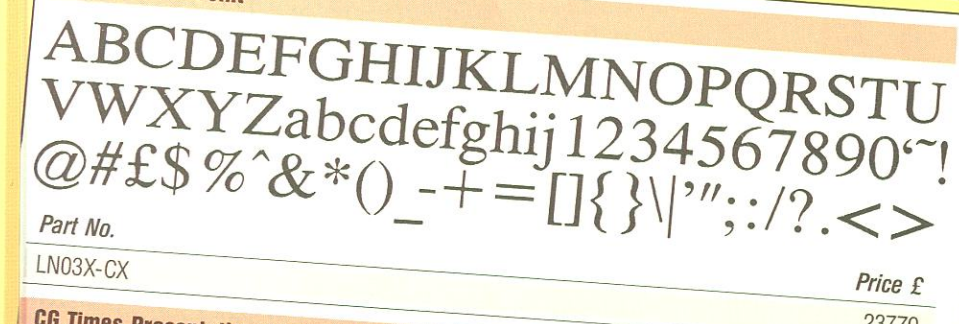


CG Triumvirate Presentation 18 Bold, 18, 14 Point

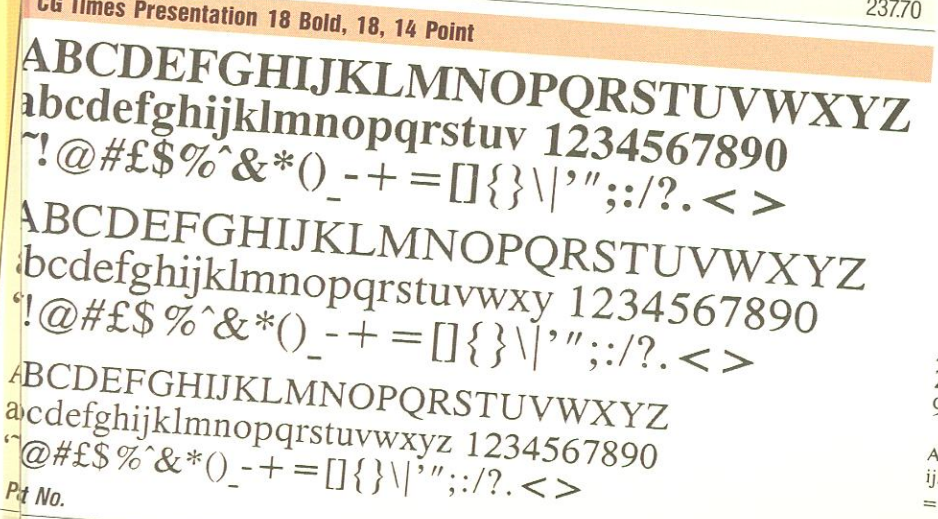


CG Triumvirate Large 24 Point

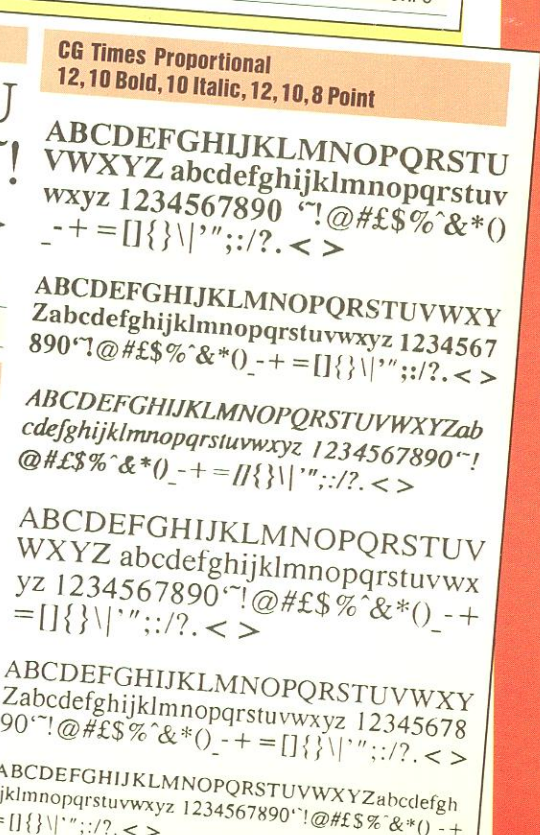
CG Times 24 Point



CG Times Presentation 18 Bold, 18, 14 Point



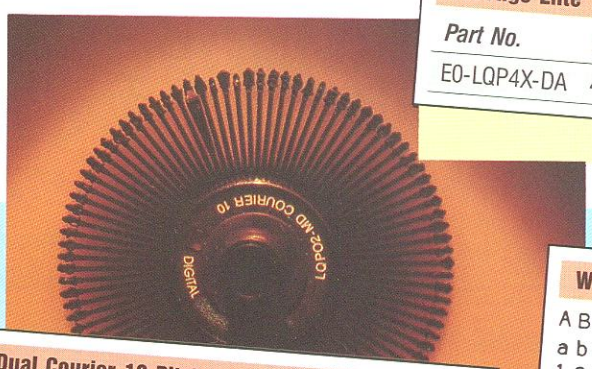
CG Times Proportional
12, 10 Bold, 10 Italic, 12, 10, 8 Point



Typefaces
for printwheels

Digital printwheels (daisy wheels) have been carefully selected to provide a wide range of printstyles, enabling you to choose those most suited to your particular application. Using Digital printwheels means complete compatibility with your printer, and will ensure that your printed documents are of the highest quality.

Both the LQP03 and LQP45 printwheels are multi-national and are, therefore, suitable for handling international correspondence and business documentation.



Printwheels for LQP45 Printers

Mikron 15 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"£$%&'()*+,-./
:;<=>?@[\]^_`{|}~¡¢£¥§¤©
ª«°±²³µ¶·¹º»¼½¿ÀÁÂÃÄÅÆÇÈÉÊ
ËÌÍÎÏÑÒŒØÓÔÕÖÙÚÛÜŸßàáâãäåæ
çèéêëìíîïñòóôõöœøùúûüÿ

Part No.	Quantity	Price £
E0-LQP4X-CH	4	63.60

Box Containing one of each LQP45-Courier 10, Modern PS, Letter Gothic 12, Prestige Elite 12

Part No.	Quantity	Price £
E0-LQP4X-DA	4	63.60

Courier 10 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"£$%&'()*+,-./
:;<=>?@[\]^_`{|}~¡¢£¥§¤©
ª«°±²³µ¶·¹º»¼½¿ÀÁÂÃÄÅÆÇÈÉÊ
ËÌÍÎÏÑÒŒØÓÔÕÖÙÚÛÜŸßàáâãäåæ
çèéêëìíîïñòóôõöœøùúûüÿ

Part No.	Quantity	Price £
E0-LQP4X-CA	4	63.60

Modern Proportional Spacing

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"£$%&'()*+,-./
:;<=>?@[\]^_`{|}~¡¢£¥§¤©
ª«°±²³µ¶·¹º»¼½¿ÀÁÂÃÄÅÆÇÈÉÊ
ËÌÍÎÏÑÒŒØÓÔÕÖÙÚÛÜŸßàáâãäåæ
çèéêëìíîïñòóôõöœøùúûüÿ

Part No.	Quantity	Price £
E0-LQP4X-CJ	4	63.60

Printwheels for LQP02 printer

Dual Courier 10 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 ~!@|£|$%^&*()-+=:;
"'|\{[]}.,,?><

Part No.	Quantity	Price £
LQP02-NC	6	35.80

WP Gothic 15 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 ™!@#$%©&*()-+=:;
"'¶®§[†].,,?><

Part No.	Quantity	Price £
E0-LQP02-MT	6	39.80

England Courier 10 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"£$%&'()*+,-./
:;⅛=⅜?@[½]¼_°⅝|¾⅞

Part No.	Quantity	Price £
E0-LQP02-MP	6	39.80

England Prestige Elite 12 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"£$%&'()*+,-./
:;⅛=⅜?@[½]¼_°⅝|¾⅞

Part No.	Quantity	Price £
E0-LQP02-MR	6	39.80

UKN Letter Gothic 12 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"#$%&'()*+,-./
:;<=>?@[æ]^_°§Æø¨

Part No.	Quantity	Price £
E0-LQP02-MB	6	39.80

Courier 10 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"#$%&'()*+,-./
:;<=>?@[®]©_°§¶†™

Part No.	Quantity	Price £
E0-LQP02-MD	6	35.80

ASCII 96 Prestige Elite 12 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"#$%&'()*+,-./
:;<=>?@[\]^_`{|}~

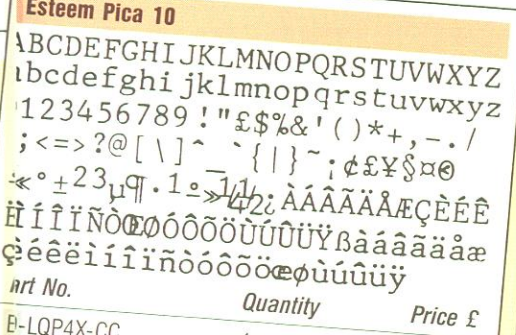
Part No.	Quantity	Price £
E0-LQP02-MV	6	39.80

Prestige Elite 12 Pitch

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789 !"#$%&'()*+,-./
:;<=>?@[®]©_°§¶†™

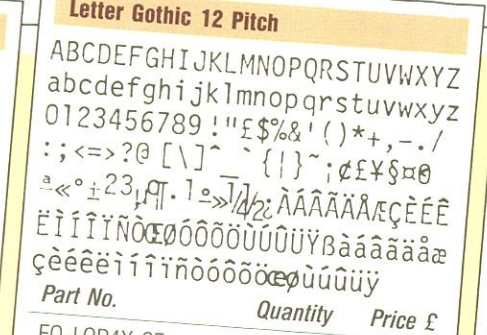
Part No.	Quantity	Price £
E0-LQP02-MF	6	39.80

Esteem Pica 10



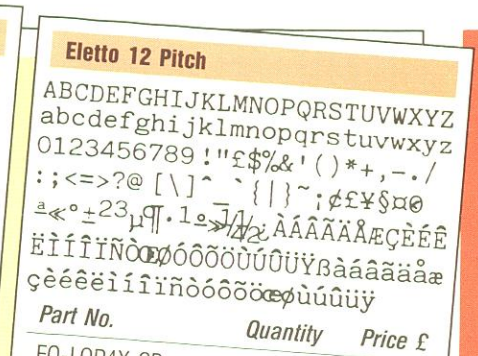
Part No.	Quantity	Price £
E-LQP4X-CC	4	63.60

Letter Gothic 12 Pitch



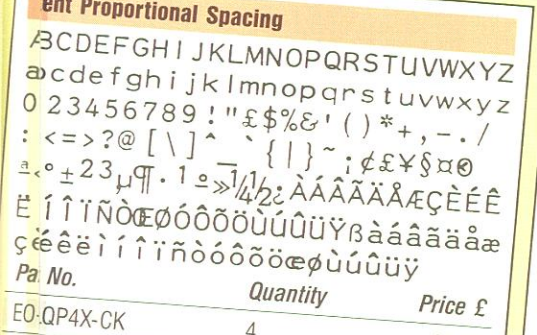
Part No.	Quantity	Price £
EO-LQP4X-CE	4	63.60

Eletto 12 Pitch



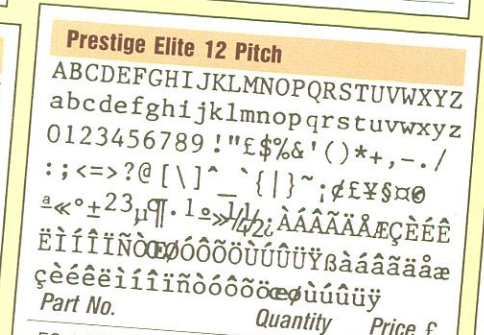
Part No.	Quantity	Price £
EO-LQP4X-CB	4	63.60

ent Proportional Spacing



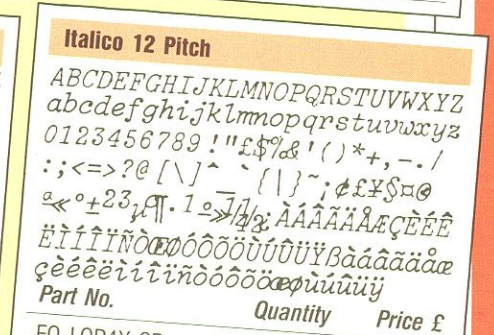
Part No.	Quantity	Price £
EO-LQP4X-CK	4	63.60

Prestige Elite 12 Pitch



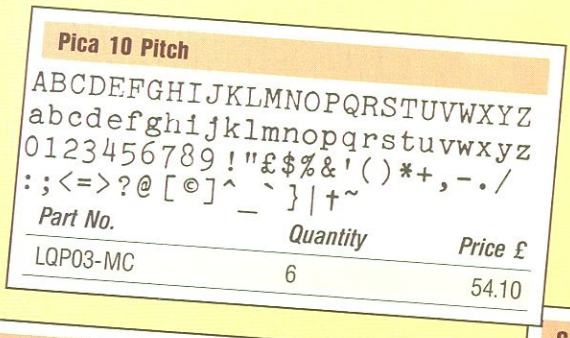
Part No.	Quantity	Price £
EO-LQP4X-CF	4	63.60

Italico 12 Pitch



Part No.	Quantity	Price £
EO-LQP4X-CD	4	63.60

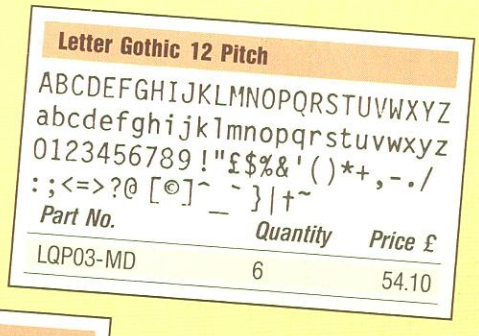
Pica 10 Pitch



Part No.	Quantity	Price £
LQP03-MC	6	54.10

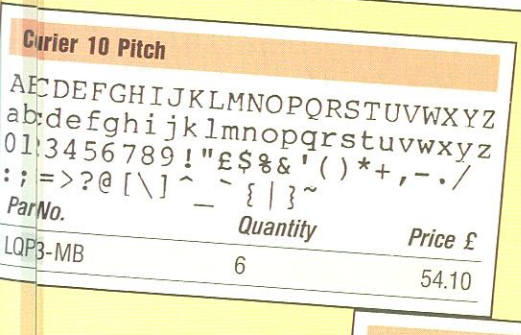
Printwheels for LQP03 Printer

Letter Gothic 12 Pitch



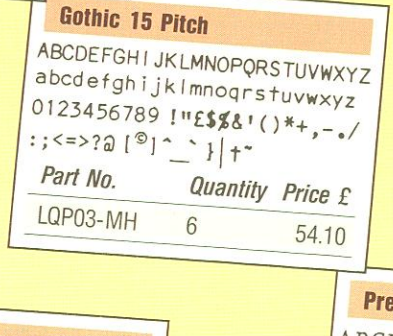
Part No.	Quantity	Price £
LQP03-MD	6	54.10

Curier 10 Pitch



Part No.	Quantity	Price £
LQP3-MB	6	54.10

Gothic 15 Pitch

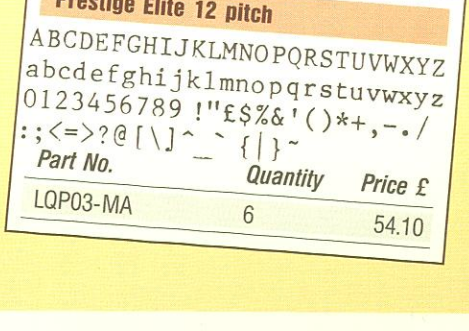


Part No.	Quantity	Price £
LQP03-MH	6	54.10

Box Containing one each of LQP03-MA/MB/MC/MD/ ME/MF

Part No.	Quantity	Price £
LQP03-NS	6	54.10

Prestige Elite 12 pitch



Part No.	Quantity	Price £
LQP03-MA	6	54.10

LN03 Font Cartridge Set for use with VT100/VT200 video terminals

Plug-in cartridges fully integrate the LN03 with your VT100/VT200

With this font cartridge set, the LN03 will print all the graphics and text unique to the VT100 and VT200 video terminals.

This gives you the benefit of printing double height and double width characters, special graphics, simulated reverse video, bold, underline and the VT100 line drawings.

It is also especially useful in producing high quality hard copies of VAX system VMS software video forms.

Part No.	Description	Price £
LN03X-DA	VT100/VT200 Font Set	396.70

LN03 'Font Packages'

Company logo software

All LN03 users can now obtain special font packages with their own logo's symbols, signatures and other images.

They represent a fast alternative to preprinted paper and provide instant access to your company logo or frequently used signatures.

These fonts are supplied as either cartridge or magnetic tape and offered as a special service in conjunction with the Compugraphic Corporation.

A special order form is required from the Compugraphic office in Ireland. When ordering quote LN03-TYPE

Telephone: 010 353 61 61011.
Telex: 72092/72005.
Fax: 010 353 61 62702.

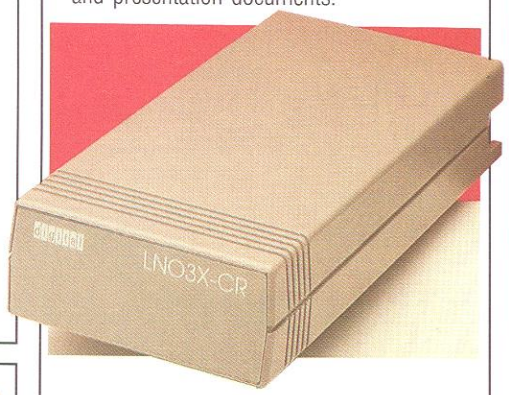
Guide to installation symbols

- I — Free installation by Digital
- C — Designed to be installed by customers
- O — Designed to be installed by customers Free assistance given if required

LN03 RAM Cartridge

Add-on memory gives extra versatility to your LN03 printer

The range and versatility of your LN03 can be easily extended by plugging in the optional 128 Kb RAM cartridge. This expands the resident memory and enables the LN03 to accept down-line loaded fonts to give a greater choice of typeface styles. The RAM cartridge also enables data to be printed in landscape format which is often useful for reports and presentation documents.



Part No.	Description	Price £
LN03X-CR	LN03 RAM Cartridge	198.00
E0-LN03X-2R	LN03 RAM Cartridge – Twin Pack **save 10%**	357.00

Bar Codes

Now print bar codes!

Users of LN03 printers can now add the facility of producing industry-standard 3 of 9 bar codes. Two heights are included, one for the alphabetic characters and the other for the bar code itself which prints at 4.7 characters per inch to meet MIL Spec 1189A.

Part No.	Description	Price £
LN03X-DE	Bar Code Font	237.70

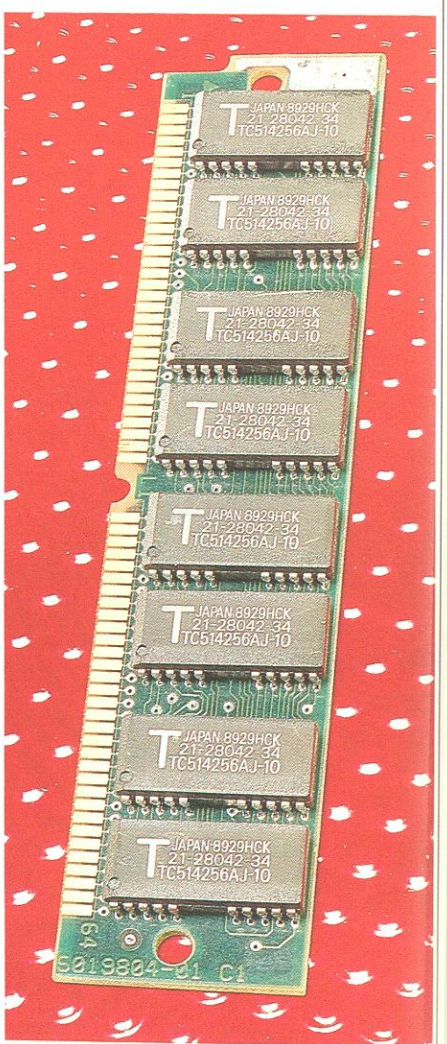
VT1200 Memory Board

Memory boost you simply plug-in

These easy to fit memory boards can add up to two extra Mbs to your VT1200 terminal.

The additional memory for your VT1200 will enable you to run more concurrent sessions and maximise the benefits of the DECwindows functionality.

The VT1200 terminal has 2 Mb of memory. This can be increased to 3 or 4 Mb by respectively plugging in one or two VX10X-MD memory boards.

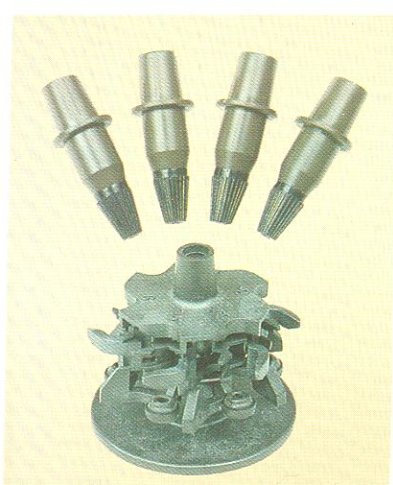


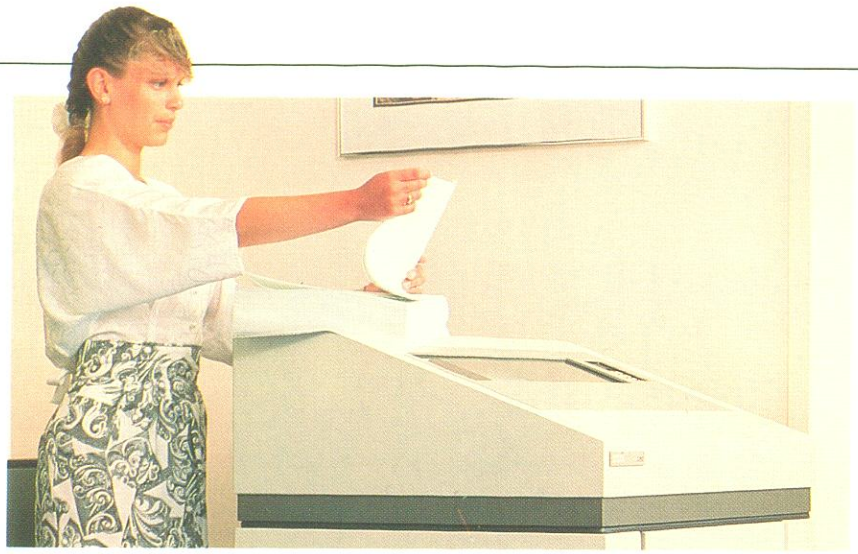
Part No.		Description	Price £
VX10X-MD	C	1 Mb Memory Board	314.00

Note: although this memory board is customer installable, it is important that the instructions are carefully read before installation and adhered to.

Printbands

A wide choice of printbands for your LP25, 26, 27, 29 and 37 printers





Part No.	Description	Price £
LP25/26/27 Band/Prom		
E0-LP25X-BA	LP25 Band/Prom 64 character – 10 cpi	420.60
E0-LP25X-BB	LP25 Band/Prom 96 character – 10 cpi	420.60
E0-LP26X-BA	LP26 Band/Prom 64 character –10 cpi	420.60
E0-LP26X-BB	LP26 Band/Prom 96 character – 10 cpi	420.60
E0-LP27X-BA	LP27 Band 64 character – 10 cpi	420.60
E0-LP27X-BB	LP27 Band 96 character– 10 cpi	420.60
For LP29		
E0-LP29X-AA	LP29 Band US 64 character c font	420.60
E0-LP29X-AC	LP29 Band US 64 character optimised c font	449.70
E0-LP29X-AD	LP29 Band US 96 character c font	420.60
E0-LP29X-AE	LP29 Band US 96 character OCR-B	420.60
E0-LP29X-AF	LP29 Band US 64 character OCR-B	420.60
E0-LP29X-EA	LP29 Band UK 64 character optimised	449.70
E0-LP29X-EB	LP29 Band UK 64 character optimised + prom	480.30
E0-LP29X-EC	LP29 Band UK 96 character OCR-B	420.60
For LP37		
E0-LP37X-AA	LP37 Band US 64 character	384.80
E0-LP37X-AC	LP37 Band US 96 character	384.80
E0-LP37X-BA	LP37 Band US 64 character OCR-B	384.80
E0-LP37X-BC	LP37 Band US 96 character OCR-B	384.80
E0-LP37X-BD	LP37 Band US 96 character OCR-A	384.80
E0-LP37X-EA	LP37 Band UK 64 character	384.80
E0-LP37X-EC	LP37 Band UK 96 character	384.80

Plotter Pens for LVP16 Printer

For Paper

E0-LVPXX-AL	0.3 mm Nib – black, red, green, blue, yellow (packs of five)	9.80
E0-LVPXX-AM	0.7 mm Nib – black, red, green, blue, yellow (packs of five)	9.80
E0-LVPXX-AN	0.3 mm Nib – light blue,lime, violet, brown, orange (packs of five)	9.80
E0-LVPXX-AP	0.7 mm Nib – light blue, lime, violet, brown, orange (packs of five)	9.80
E0-LVPXX-AW	0.3 mm Nib – black (packs of five)	9.80
E0-LVPXX-AV	0.7 mm Nib – black (packs of five)	9.80

For Transparencies

E0-LVPXX-AR	0.3 mm Nib – black, red, green, blue, yellow (packs of five)	9.80
E0-LVPXX-AS	0.7 mm Nib – black, red, green, blue, yellow (packs of five)	9.80
E0-LVPXX-AT	0.3 mm Nib – black, violet, brown, orange, yellow (packs of five)	9.80
E0-LVPXX-AU	0.7 mm Nib – black, violet, brown, orange, yellow (packs of five)	9.80
E0-LVPXX-AY	0.3 mm Nib – black (packs of five)	9.80
E0-LVPXX-AZ	0.7 mm Nib – black (packs of five)	9.80
LVPXX-AK	Pen Carousel	26.40

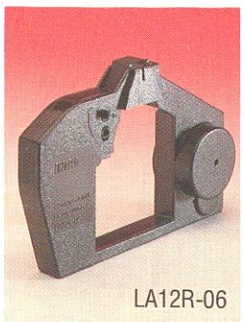
Ribbons and Cartridges

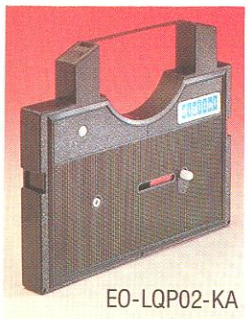
Quality ribbons are the natural companion for quality paper – both are vital for getting the best from your Digital printer.

This guide will help you order the right ribbon for your equipment and you can be sure of obtaining optimum results.

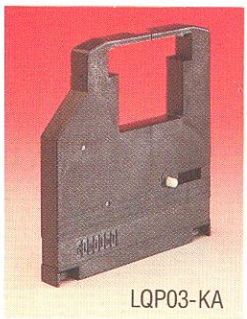
LA24R-KA/KC

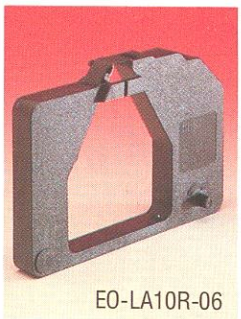
EO-LA50R-06


LA12R-06


EO-LQP02-KA

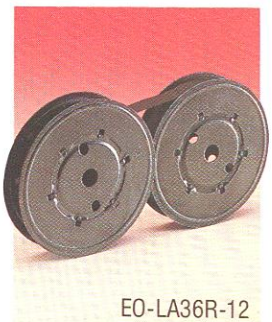
EO-LQP01-KA


LQP03-KA


EO-LA10R-06

EO-LXYXX-RB

EO-L120R-12


EO-LA36R-12

Use Digital ribbons and cartridges for best results

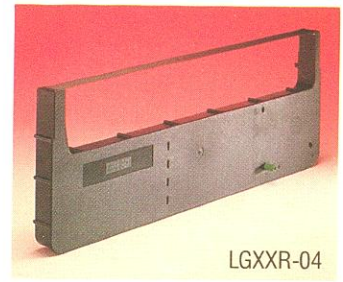
Buyers Guide

Your Printer	*Part No.*	*Description (approx. yield)*	*Dimensions*	*Boxed Quantity*	*Price £*
LA12	**LA12R-06**	Re-inking Cartridge (5-7 million characters)	18 ft long	6	41.70
LA30 LA35 LA36	**EO-LA36R-12**	Nylon, dual spool (3 million characters)	½" wide 120 ft long	12	59.60
LA50 LA75	**EO-LA50R-06**	Nylon, continuous loop (1.1 million characters)	44 ft long	6	21.90
	EO-LA50R-1D	**Bulk Pack** 12 × EO-LA50R-06		72 **save 20%**	209.90
	EO-LA50R-1L	**Bulk Pack** 26 × EO-LA50R-06		156 **save 25%**	427.30
LA70	**EO-LA70R-06**	Continuous loop (2 million characters)	57.4 ft long	6	20.70
	EO-LA70R-1D	**Bulk Pack** 12 × EO-LA70R-06		72 **save 15%**	210.70
LA34 LA38	**EO-LA10R-06**	Re-inking Cartridge (8 million characters)	26 ft long	6	33.40
LA100 LA210	**EO-LA10R-1D**	**Bulk Pack** 12 × EO-LA10R-06		72 **save 12%**	353.00
	EO-LA10R-1L	**Bulk Pack** 24 × EO-LA10R-06		144 **save 20%**	640.80
LA120 LA180	**EO-L120R-12**	Nylon dual spool (6-8 million characters)	½" wide 180 ft long	12	56.60
LA324	**EO-LA24R-KA**	Continuous loop (5 – 6 million characters)	35 ft long	6	52.10
	EO-LA24R-1D	**Bulk Pack** 12 × LA24R-KA		72 **save 15%**	531.50
	EO-LA24R-KC	Continuous loop (700,000 characters) Colour Ribbon Black, Blue, Red, Yellow	35 ft long	6	67.20
LP05 LP06	**EO-LP05R-01**	(400,000 lines)	15" wide 60 ft long	1	37.40
LP07 LP14 LP27	**EO-LP27R-01**	(400,000 lines)	15" wide 45 ft long	1	35.80

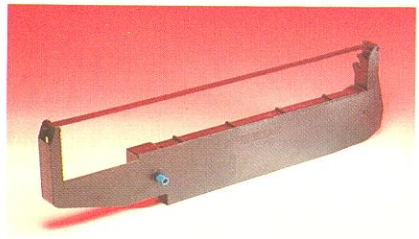
E0-LP37R-01

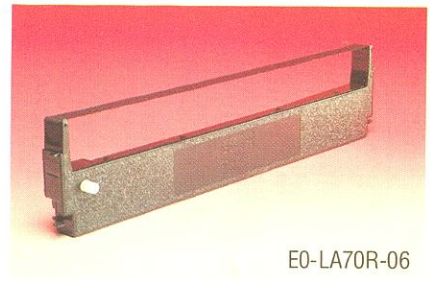
E0-LQP25-KB

LGR31-01


LGXXR-04

E0-LP25R-06


E0-LQP02-KA


E0-LA70R-06

E0-LP29R-01

E0-LP05R-01

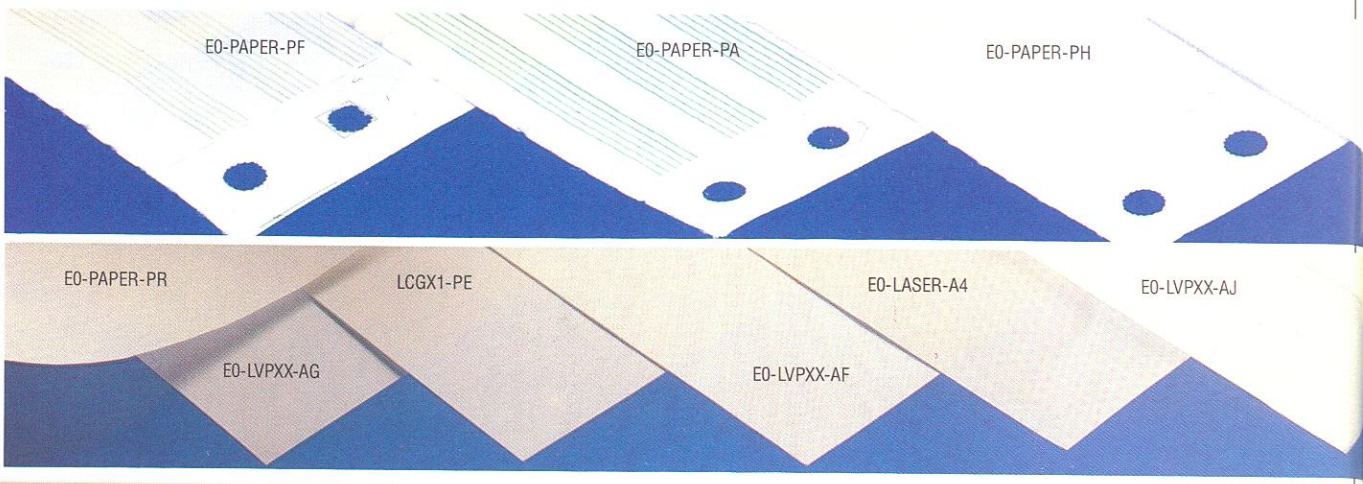
E0-LP27R-01

Buyers Guide

Your Printer	*Part No.*	*Description (approx. yield)*	*Dimensions*	*Boxed Quantity*	*Price £*
LG01 LG02	**LGXXR-04**	Cartridge (20 million characters)	1" Wide 155 ft long	4	110.50
	E0-LGXXR-1L	**Bulk Pack** 5 × LGXXR-04		20 **save 15%**	469.80
LG31	**LGR31-01**	(400,000 lines)		1	50.90
	E0-LGR31-1L	**Bulk Pack** 6 × LGR31-01		6 **save 15%**	259.20
LP25 LP26	**E0-LP25R-06**	(300,000 lines)	148 ft long	6	83.50
LP29	**E0-LP29R-01**	(750,000 lines)	75 ft long	1	48.50
	E0-LP29R-02	Ribbon Shield		1	31.00
	E0-LP29R-03	OCR applications (400,000 lines)		1	83.50
LP37	**E0-LP37R-01**	(400,000 lines)		6	196.40
	E0-LP37R-02	ORC applications (400,000 lines)		6	196.40
LQP01	**E0-LQP01-KA**	Multistrike (200,000 characters)	400 ft long	6	25.40
LQP02	**E0-LQP02-KA**	Multistrike (240,000 characters)	502 ft long	6	27.20
LQP03	**LQP03-KA**	Multistrike (180,000 characters)	330 ft long	6	39.00
LQP45	**E0-LQP25-KA**	Multistrike (483,000 characters)		1	12.80
	E0-LQP25-1L	**Bulk Pack** 12 × E0-LQP25-KA		12 **save 24%**	117.00
	E0-LQP25-KB	Nylon, continuous loop (4 million characters)		1	12.80
LXY11/22	**E0-LXYXX-RB**	Nylon	20 ft long	6	63.60

LJ250 – Ink Cartridge see page 114
LCG01 – Ink Cartridge see page 114

For other volume purchase requirements please ☎ for more information.



Paper Supplies

Even the best printers need quality paper to give satisfactory results

You will not get the best results using inferior paper and small cost savings are not savings if tractor feeds bind or jam.

There is more to paper than may at first be apparent and Digital users are recommended to use onlyl Digital paper.

Special Surface for Clearest Results

The two sizes of paper listed in our chart for the LJ250 printer have a special clay coating, which gives a smooth surface. This paper has been specially produced for the LJ250 and will ensure the sharpest reproduction.

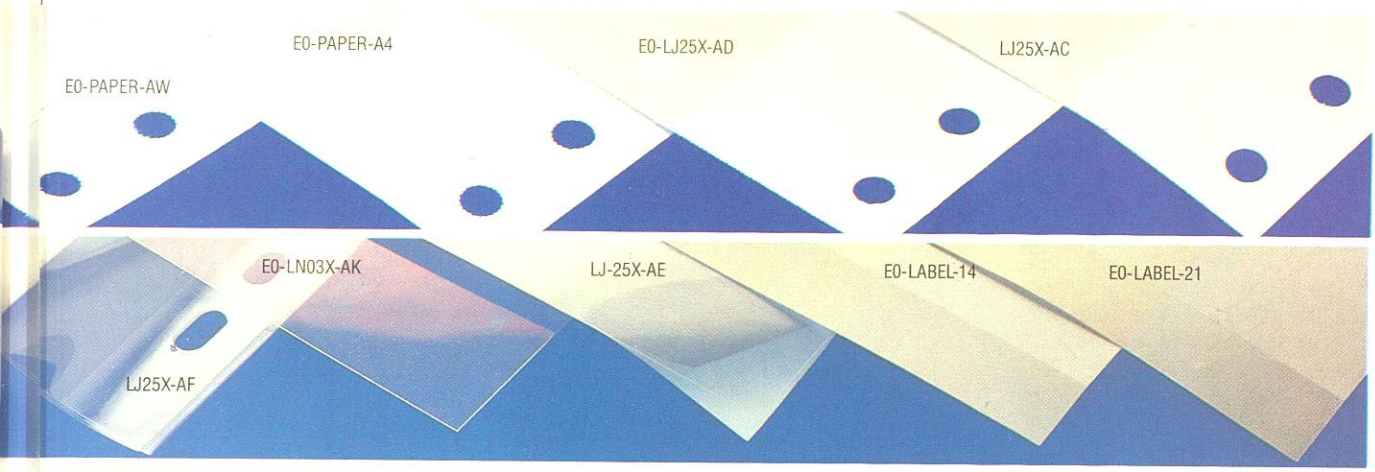
LJ250 Transparencies

Cut sheet transparencies are available in two sizes, specially produced for use with the LJ250 and are the only transparencies suitable for this printer.

LN03/LPS20/LPS40 Laser Printers

To get the best results from your printer, choose from the paper listed in the chart. Alternative paper can give poor results, cause paper jamming and other time-consuming and annoying problems.

Recommended Stock	Printer LA12	LA50 LA70 LA75	LA34/38 LA100	LA120	LA210	LA324	LQP45	LQP02 LQP03	LJ250	LN01 LN03	DEClaser 2100/ 2200	LPS20 LPS40	LVP16	LCG01	LG31	LG01 LG02	LP25 LP27 LP29 LP37
Fanfold Paper																	
E0-PAPER-AW	–	●	●	●	●	●	–	–	–	–	–	–	–	–	●	●	●
E0-PAPER-PA	–	–	●	●	●	●	–	–	–	–	–	–	–	–	●	●	●
E0-PAPER-PF	–	●	●	●	●	●	●	●	–	–	–	–	–	–	●	●	●
E0-PAPER-PH	●	●	●	●	●	●	●	●	–	–	–	–	–	–	●	●	●
E0-PAPER-A4	–	●	●	●	●	●	●	●	–	–	–	–	–	–	●	●	●
LJ25X-AC	–	–	–	–	–	–	–	–	●	–	–	–	–	–	–	–	–
E0-LJ25X-AD	–	–	–	–	–	–	–	–	●	–	–	–	–	–	–	–	–
Roll Paper																	
E0-PAPER-PR	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cut Sheet Paper																	
E0-LASER-A4	●	●	●	–	●	●	●	●	–	●	●	●	–	–	–	–	–
E0-LASER-A3	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–	–	–
LCGX1-PE	–	–	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–
E0-LVPXX-AF	–	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–	–
E0-LVPXX-AG	–	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–	–
Transparencies																	
E0-LN03X-AK	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–
E0-LVPXX-AJ	–	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–	–
LJ25X-AE	–	–	–	–	–	–	–	–	●	–	–	–	–	–	–	–	–
LJ25X-AF	–	–	–	–	–	–	–	–	●	–	–	–	–	–	–	–	–
LCGX1-AE	–	–	–	–	–	–	–	–	–	–	–	–	–	●	–	–	–
Labels																	
E0-LABEL-14	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–
E0-LABEL-21	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–
E0-LABEL-30	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–



Buyers Guide

Quality Paper

Why it matters

- Precise cut and trim ensures correct function
- Correct thickness safeguards against jamming and multiple sheet feeding
- Controlled manufacturing process ensures good and consistent quality
- Correct packaging and storage avoids temperature extremes and damaging humidity
- Surface finish must be manufactured to suit printing method
- Top quality paper minimises print head wear
- Accurate punching and folding ensures good tractor flow
- Top grade surface gives crisp clean results and better complements your Digital equipment

Part No.	*Description*	*Width inches*	*(mm)*	*Length inches*	*(mm)*	*Parts*	*Sheets*	*Weight (gsm)*	*Price £*
Fanfold Paper									
E0-PAPER-AW	White, tear edge (micro)	9.45	(240)	12	(304)	single	2000	60	25.70
E0-PAPER-PA	Lined, no tear edge	14.8	(378)	11	(279)	single	2000	60	30.20
E0-PAPER-PF	Lined, tear edge	9.8	(249)	11	(279)	single	2000	60	22.70
E0-PAPER-PH	White, tear edge	9.5	(242)	11	(279)	single	2000	60	21.10
E0-PAPER-A4	White, tear edge (micro)	8.3	(210)	11.75	(298)	single	2000	70	43.80
LJ25X-AC	Continuous form for LJ250	8.5	(216)	11	(279)	single	250		14.30
E0-LJ25X-AD	Continuous form for LJ250	8.3	(210)	12	(304)	single	250		23.90
Roll Paper									
E0-PAPER-PR	White	8.5	(216)	3937	(100 m)	single	24 (Rolls)		50.60
Cut Sheet Paper									
E0-LASER-A4	White, cut sheet, A4	8.3	(210)	11.7	(297)	single	2500	80	24.20
E0-LASER-A3	White, cut sheet, A3	11.7	(297)	16.6	(420)	single	2500	80	57.40
LCGX1-PE	White, ink jet paper, A4	8.3	(210)	11.7	(297)	single	500		46.80
E0-LVPXX-AF	White, plotter paper, A4	8.3	(210)	11.7	(297)	single	200		16.60
E0-LVPXX-AG	White, plotter paper, A3	11.7	(297)	16.5	(420)	single	200		32.50
Transparencies									
E0-LN03X-AK	For LN03 Printer, A4	8.3	(210)	11.7	(297)	single	50		27.80
E0-LVPXX-AJ	For LVP16 Printer, A4	8.3	(210)	11.7	(297)	single	50		52.10
LJ25X-AE	For LJ250 Printer	8.5	(216)	11.75	(298)	single	50		52.90
LJ25X-AF	For LJ250 Printer, A4	8.3	(210)	11.7	(297)	single	50		53.60
LCGX1-AE	For LCG01 Printer, A4	8.3	(210)	11.7	(297)	single	100		109.70
Labels									
		Label Depth		Label Width					
E0-LABEL-14	Laserprinter Labels – A4	4.13	(105)	1.67	(42.4)	14 per sheet 100			24.20
E0-LABEL-21	Laserprinter Labels – A4	2.76	(70)	1.67	(42.4)	21 per sheet 100			24.20
E0-LABEL-30	Laserprinter Labels – A4	2.76	(70)	1.17	(29.7)	30 per sheet 100			24.20

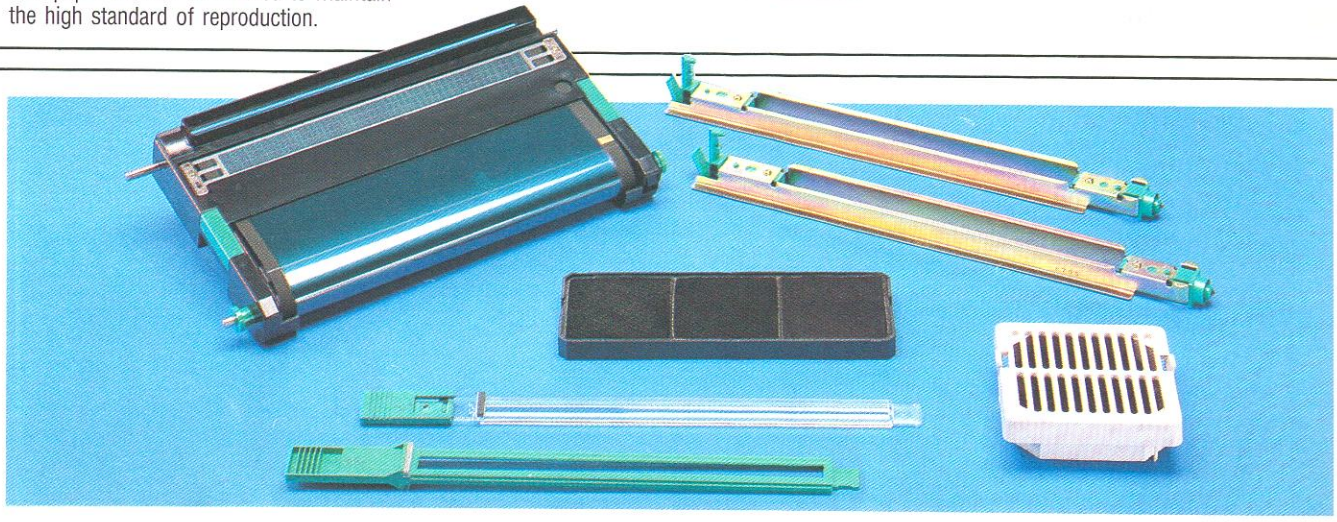
Ink Cartridges

The only ink cartridges recommended for your colour printer

The quality of these ink cartridges is precisely matched to your colour printer. They allow a controlled flow of ink onto the paper and are formulated to maintain the high standard of reproduction.

Available in both black and colour.

Part No.	Description	Price £
LJ250		
LJ25X-AA	Colour Ink Cartridge (Average life 975,000 characters)	32.30
LJ25X-AB	Black Ink Cartridge (Average life 1,000,000 characters)	25.50
LCG01		
LCGX1-JB	Black Ink Cartridge	135.20
LCGX1-JC	Cyan Ink Cartridge	135.20
LCGX1-JM	Magenta Ink Cartridge	135.20
LCGX1-JY	Yellow Ink Cartridge	135.20



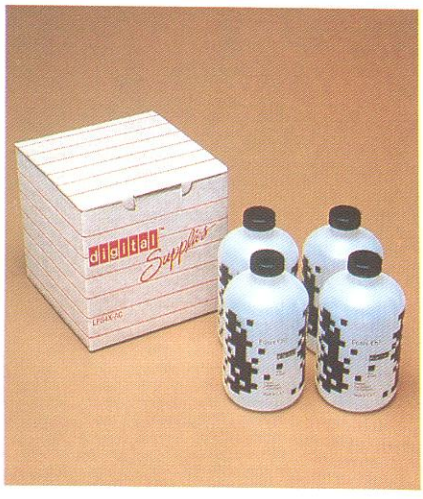
User Maintenance Kits

Get these easy to use kits and ensure continuous top quality output from your printers

In order that your printer continues to provide perfect copies, it is important that it is well and regularly maintained. Keeping it in peak condition is quick and simple – these kits provide all you need to do the job. We recommend that it be carried out regularly and in accordance with the instructions included with your printer.

LN03 kit contains:
- 1 Organic Photoreceptor Cartridge (print belt)
- 2 Corona Wires
- 1 Glass Shield
- 1 Ozone Filter

LPS40 kit contains:
- 2 Cleaning Unit Cleaning Blades
- 1 Developer Collection Bottle
- 1 Developer Cartridge
- 1 Fusing Unit Cleaning Blade
- 1 Fusing Unit Cleaning Pad



Part No.	Description	Price £
LN03		
LN03X-AD	LN03 User Maintenance Kit (Up to 10,000 pages)	142.70
E0-LN03X-AS	LN03 Pack of 6 Fuser Roller Cleaning Rolls	36.20
E0-LN03X-1D	**Bulk Pack** 6 × LN03X-AD **save 10%**	770.10
LPS40		
LPS4X-AB	LPS40 User Maintenance Kit (Up to 100,000 pages)	158.20
LPS4X-AC	Fuser Oil (up to 50,000 pages)	31.00
LCG01		
LCGX1-JW	Cartridge	55.30

Toner Cartridge Kits

Essential consumables you'll need to keep your printer in perfect order

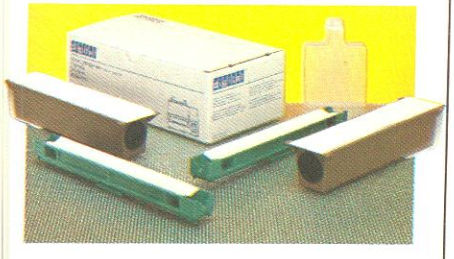
LPS40

A kit of six cartridges is available for the LPS40 printer which gives adequate supply for up to 60,000 pages.

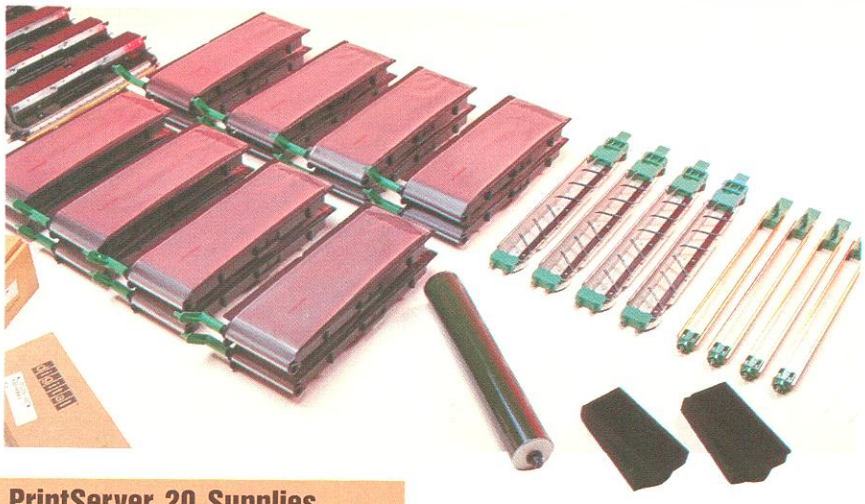
LN03

After approximately 3,000 pages, the toner cartridge in your LN03 will need to be replaced. The LN03 toner pack contains two cartridges together with the fuser roller cleaning pads and an excess toner collection bottle.

Kits for LN03 and LPS40 are not interchangeable.



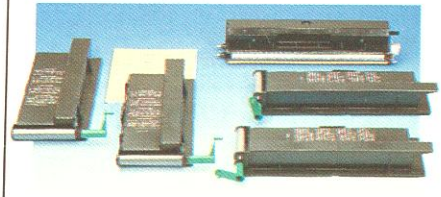
Part No.	*Description*	*Price £*
LPS4X-AA	LPS40 Toner Cartridge Kit	158.20
E0-LN03X-AC	LN03 Toner Cartridge Kit	59.60
E0-LN03X-1L	**Bulk Pack** 12 × E0-LN03X-AC **save 26%**	528.50



PrintServer 20 Supplies

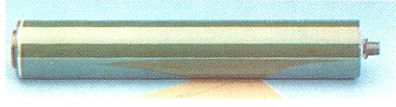
Essential supplies ensure peak performance and top quality printing

Three kits plus one Bulk Pack for your LPS20 laser printer to be used at 20,000 and 80,000 page intervals. Easy to use, these kits will maintain the high standard of print output and ensure continued reliability, and they're a more economical way to buy supplies.

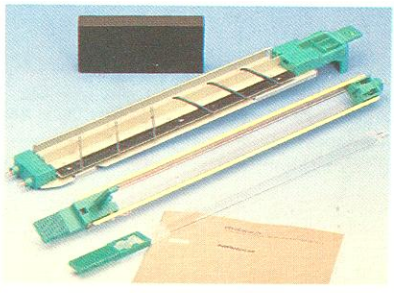


Toner/cleaning kit contains:
- 4 Toner Cartridges
- 1 Cleaning Unit
- 1 Toner Guide

Laser pack contains:
- 4 Toner Kits
- 1 Drum Kit
- 4 Charger Kits



Drum kit contains:
- 1 Opc Drum
- 1 Opc Drum Kit Guide



Charger/filter kit contains:
- 1 Main Charger
- 1 Transfer/Separation Charger
- 1 Glass Shield
- 1 Ozone Filter
- 1 Instruction Manual

Part No.	*Description*	*Price £*
LPS2X-AA	LPS20 Toner/Cleaning Kit (Up to 20,000 pages)	160.80
LPS2X-AB	LPS20 Charger/Filter Kit (Up to 20,000 pages)	74.00
LPS2X-AC	LPS20 Drum Kit (Up to 80,000 pages)	174.40
E0-LPS2X-LP	LPS20 Laser Pack (Up to 80,000 pages) – **save 25%**	835.00

LN01 Dry Imager

Essential supplies – 4 bottles will keep you going for 25,000 copies

For continued clear reproduction the dry imager in your LN01 should be changed at least every 25,000 copies. It's a simple task that takes a few minutes but will help maintain the top quality output from your LN01.

Part No.	*Description*	*Price £*
E0-LN01X-AA	LN01 Dry Imager – 4 bottles, enough for up to 25,000 copies	69.70

Software Documentation Kits

Latest kits

Utilise your software to its maximum potential by updating your manuals now.

Please note that these documentation kits have a two week delivery time.

For more information or a copy of our new Software Documentation Catalogue please 'phone.

One 'phone call is all it takes to order any of the latest release Documentation Kits on this page.

Part No.	Description	Price £
QA-015AA-GZ	VAX C Documentation Kit	72.30
QA-095AA-GZ	VAX BASIC	255.00
QA-099AA-GZ	VAX COBOL	153.00
QA-100AA-GZ	VAX FORTRAN	85.00
QA-126AA-GZ	VAX Pascal	127.50
QA-898AA-GZ	VAX DATATRIEVE	255.00
QA-VD7AA-GZ	VAX FMS	161.50
QA-001AA-GZ	VAX VMS Documentation Kit	1870.00
QA-09SAA-GZ	VAX VMS Condensed Documentation Kit	127.50
QA-001AE-GZ	VAX VMS Command Language Dictionary	42.50
QA-001AR-GZ	VAX VMS System Routines	85.00
QA-897AA-GZ	VAX CDD	204.00
QJ668-GZ	PDP-11 FORTRAN-77 RSX	106.30
QA-056AA-GZ	VAX Ada	148.80
QA-VD2AA-GZ	VAX Rdb VMS	412.30
QA-001AM-GZ	VMS DECwindows Programming Kit	637.50
QA-09SAB-GZ	VMS DECwindows User Documentation Kit	68.00
QA-071AA-GZ	VAX PSI Documentation Kit	366.30
QA-AABEA-GZ	ALL-IN-1 UK User Documentation Kit	209.10
QA-VVFEA-GZ	DECwrite UK Documentation Kit	176.00

VAT not applicable on software documentation kits.
Prices shown are valid at date of printing. Digital reserves the right to amend its prices.

Terminal Cleaning Kit

Keeps screen and casing bright as new

Even in the cleanest environment your terminal will attract grime, so we've developed a cleaning kit to fight back. It contains two spray solutions, one for the casing and keyboard, the other for the screen. Both spray cans are CFC free.

A clean terminal looks bright and is much more pleasant to use.

The kit contains one bottle of anti-static foam, one bottle of screen cleaner fluid and 50 cloths.

Part No.	Description	Price £
E0-VT3XX-KF	Terminal Cleaning Kit	15.10

Head Cleaning Kit

Clean regularly! It prolongs equipment life and ensures optimum performance

Use this kit regularly for cleaning disk drive/write heads. This easy-to-use kit contains nine solvent soaked pads and a cleaning wand.

Part No.	Description	Price £
22-00007	Head Cleaning Kit for RK05 and RP04	3.20

Platen Cleaner

Gets rid of unwanted ink build-up

You can't expect perfectly clean copies unless printer rollers are themselves clean. The Digital Platen Cleaner is a simple item that is quick and easy to use. It will keep all printer rollers in good condition and you won't dirty your fingers in the process. The platen cleaner is impregnated with a fluid that not only cleans but restores rubber surfaces, which in turn prevents paper slip. One application is recommended for each ribbon change. Kit contains 10 disposable cleaners.

Part No.	Description	Price £
PCXXA-PC	Platen Cleaner	12.70

Tape Head Cleaning Kit

Magnetic tape drives – it pays to keep them clean

Magnetic tape drives benefit from being kept clean, a little time and care exercised will be repaid in performance many times over. This Digital cleaning fluid is carefully balanced to provide good cleaning properties, without the risk of damage to the equipment. Use it for the tape head and guides, with perfect safety. The kit contains 30 alcohol soaked pads and 30 foam swabs.

Part No.	Description	Price £
TUC03	Tape Head Cleaning Kit	14.30

TZK10 Cleaning Kit New

Use this kit for optimum drive performance

This cleaning kit gives you everything you need to keep your TZK10 drive in perfect condition.

Cleaning is recommended after 8 hours of drive use. Regular cleaning only takes very little time and will ensure maximum reliability and longevity. Each kit is sufficient for 50 cleanings.

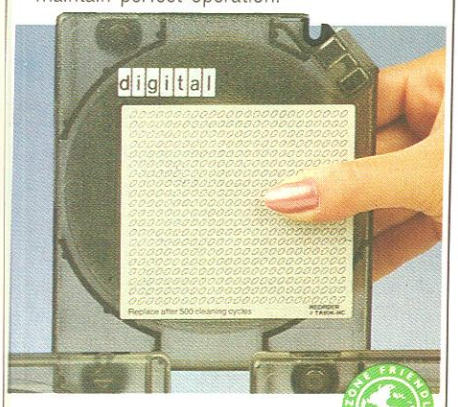
Cleaning kit contains:
- Cleaning Cartridge
- Fluid and Pads
- Tweezers
- Protective Box
- Sleeve
- Easy-to-follow Instructions

Part No.	Description	Price £
TZK1X-HA	TZK10 Cleaning Kit	34.00

TA90 Head Cleaning Kit

Perfect operation with this easy to use kit

Regular cleaning of your TA90 drive with this convenient to use kit will help maintain perfect operation.



Minimising costly down-time
Woven nylon housed in a high impact plastic cartridge
Up to 500 cleanings per cartridge

Part No.	Description	Price £
TA90K-HC	Head Cleaning Kit, set of 5	113.30

TLZ04 Cleaning Cartridge New

Keep your TLZ04 in peak condition

Regular cleaning means maximum performance and reliability. This simple-to-use kit provides everything you need to ensure your TLZ04 is operating at maximum efficiency. Recommended cleaning is after 24 hours of drive use.

Cleaning kit contains:
- Cleaning Cartridge
- Protective Box
- Insert
- Full Instructions

Part No.	Description	Price £
TLZ04-HA	TLZ04 Cleaning Cartridge	11.30

Floppy Disk Cleaning Kits New

Cleans in a single revolution

Three new cleaning kits that will keep your disk drive head clean – and the environment too!

These new CFC free kits have been specially designed to effectively and quickly clean. A specially coated diskette, cleans with a single revolution. And, unlike previous cleaners, uses no messy chemicals or cleaning pads and are odour free.

Each diskette comes in a cardboard cover with a chart to monitor usage. A kit lasts for 24 cleanings.

Part No.	Description	Price £
RXA8K-HC	8″ Drive Head Cleaner for RX01 and RX02	30.20
RXA5K-HC	5¼″ Drive Head Cleaner for RX50 and RX33	22.70
RXA3K-HC	3½″ Drive Head Cleaner for RX23	19.60

TK50/52 and TZ30 Cleaning Kits

Perfect performance in a less-than-perfect environment

Carpeted or dusty environments are not ideal for computer equipment. These new cleaning kits will help eliminate these problems to give trouble-free operation. The solvent, for application to the wands, is contained in convenient 'one application' measured ampoules.

Remember, when you've used your cleaning kit, for subsequent use, you need only purchase a refill kit.

Cleaning Kit contains:
- 1 Positioning Cartridge
- 10 Cleaning Wands
- 10 Cleaning Solvent Ampoules

Refill Kit contains:
- 20 Wands
- 20 Ampoules

Part No.	Description	Price £
TKXX-HC	TK50/52 and TZ30 Cleaning Kit	30.20
TKXXR-HC	TK50/52 and TZ30 Cleaning Kit Refill	30.20

Formula One Floppy Disks

The only disks with the performance to match your computer

Digital's Formula One diskettes meet the same strict standards of the engineers who designed your computer. This approach gives you long lasting storage reliability without the problems inferior disks can cause – problems which end up wasting the time you expected your computer to save. Read errors, premature disk wear, head wear in the drive or contamination are a thing of the past when you use Digital diskettes.

Better quality, and a price saving

Both 5¼" and 3½" Digital floppy disks are available in bulk packs of 100. This is a better way to order – you save money and having adequate stock means you won't run out.

8" RX01/RX02
- For use on DECmate 1, WS Series, all RX01, RX02 systems
- 48 tracks per inch
- Single density (can be formatted to double density using standard Digital utilities)
- Soft sector
- Single sided
- Formatted capacity 512 Kb in RX02 or 256 Kb in RX01

5¼" RX50
- For use on Rainbow, DECmate II and III, Professional Series, Micro PDP-11
- Specially formatted for Digital RX50 systems
- 96 tracks per inch
- Double density
- Soft sector
- Single sided
- Write protect notch
- Formatted capacity 409 Kb

5¼" RX33
- For use with the VAXmate and Micro PDP-11/53 system
- 96 tracks per inch
- High density
- Soft sector
- Double sided
- Write protect notch
- Formatted capacity 1.2 Mb
- Unformatted capacity 1.6 Mb

Now Digital quality available in 3½" format

The latest addition to the Digital family of floppy disks brings all the benefits of a reliable and long lasting quality product to 3½" disk format.

3½" RX23
- For use on VAXstation 3100 and DECstation PCs
- High density
- Double sided
- Formatted capacity 1.44 Mb
- Unformatted capacity 2 Mb
- 135 tracks per inch

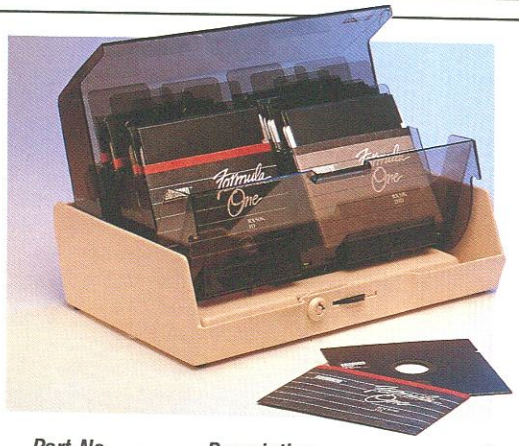
Part No.	Description	Boxed Quantity	Price £
E0-RX02K-10	8" RX01/RX02 Floppy Disks*	10	26.40
E0-RX02K-AJ	8" RX01/RX02 Floppy Disks	100	188.80
E0-RX50K-10	5¼" RX50 Floppy Disks*	10	19.90
E0-RX50K-AJ	5¼" RX50 Floppy Disks	100	143.10
E0-RX50K-1L	**Bulk Pack** 10 × E0-RX50K-10* - **save 22%**	100	155.80
E0-RX33K-10	5¼" RX33 Floppy Disks*	10	21.90
E0-RX33K-AJ	5¼" RX33 Floppy Disks	100	166.10
E0-RX33K-1L	**Bulk Pack** 10 × E0-RX33K-10* – **save 21%**	100	173.70
E0-RX23K-10	3½" RX23 Floppy Disks	10	24.20
E0-RX23K-1L	**Bulk Pack** 10 × E0-RX23K-10 – **save 15%**	100	205.40

*Re-usable library case included. For other volume purchase requirements ☎ for more information.

Keyboxes for Diskette Storage

Easy access when in use, safely locked when not

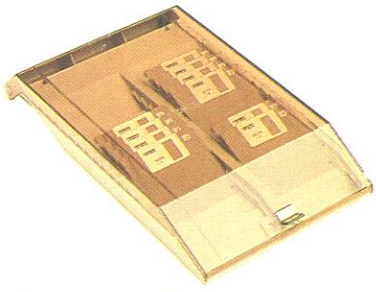
These boxes provide for either 3½" or 5¼" diskettes, twice the protection against tampering and theft by means of a double locking system. A wheel lock gives quick and easy action for daytime security whilst the additional special non-magnetic keylock and acrylic key provide extra long term security. Each box comes complete with removable dividers and a supply of index labels, 3½" and 5¼" sizes.



Part No.	Description	Capacity	Dimensions (mm) H	W	D	Price £
E0-DFILE-02	Keybox for 5¼" Diskettes	25	140	200	248	24.20
E0-DFILE-03	Keybox for 5¼" Diskettes	50	140	350	248	33.20
E0-DFILE-04	Keybox for 3½" Diskettes	40	139	240	220	29.40

Floppy Storage Box/File

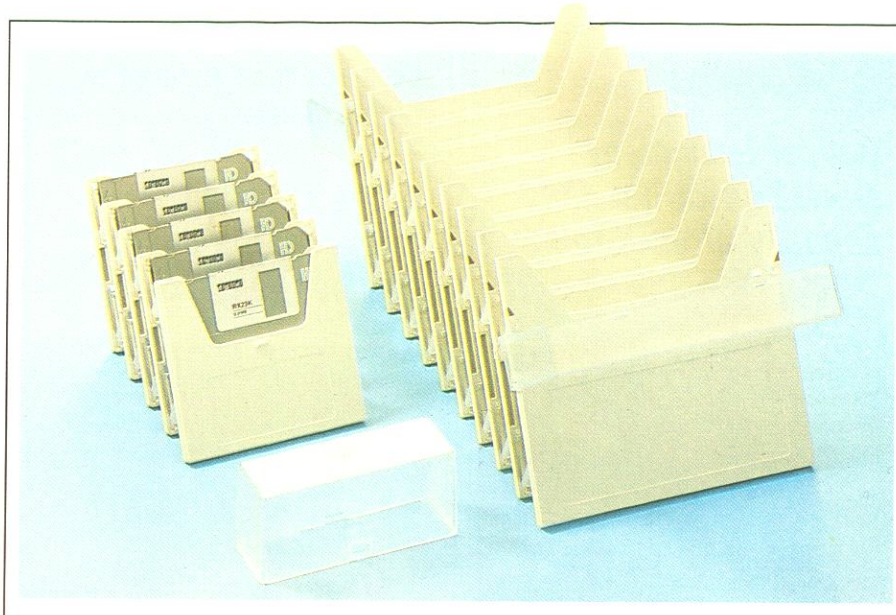
Lockable box that's a handy file & protective carrying case



The most versatile diskette storage box yet. Made of anti-static crushproof materials, it can be placed on your desk vertically or horizontally or hung on the wall. It's compact enough to fit inside a briefcase for safe transportation of up to 30 3½" diskettes.

Double locking system, button and key, ensure security too.

Part No.	*Description*	*Price £*
E0-CFILE-02	3½" Storage Box 30	16.60



Concertina Floppy Storage Box/File

Quick-reference desktop file that folds for briefcase use

Useful concertina boxes, one holding up to 10 3½", the other up to 10 5¼" floppies. Either box will sit neatly on your desk for easy filing. Both will fold concertina style to fit into a briefcase or drawer.

Part No.	*Description*	*Price £*
E0-HFILE-01	Concertina Storage Box for 10 3½" Diskettes	9.80
E0-HFILE-02 NEW	Concertina storage Box for 10 5¼" diskettes	11.30

Disk Cartridges

Advanced design eliminates drive alignment problems to give optimum performance

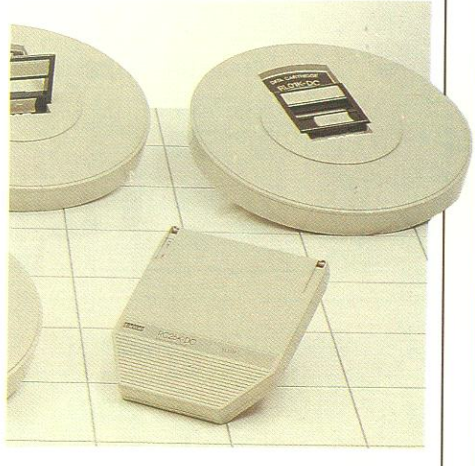
The RL01 and RL02 disk cartridges are so advanced that we have patented the embedded servo control technique to position the drive head – substantially reducing drive alignment problems and enhancing data integrity.

Special cover magnets help to reduce contamination caused by particle spreading, and a six hole hub design provides optimum performance on your Digital drive. Choose the standard (DC) cartridges for operating systems that can manage bad blocks, or the error-free (EF) for systems that lack this capability. All RL01, RL02, RK07 and RC25 cartridges are delivered with a factory installed Shockwatch Impact Detector.

Shockwatch Impact Detector

Gives a warning before the damage is done

Factory installed Shockwatch indicates any possible damage. This means you can be sure your cartridge is in perfect condition and helps prevent a damaged cartridge from causing a head crash, downtime and lost data. A change in the window display from clear to red indicates possible cartridge damage.

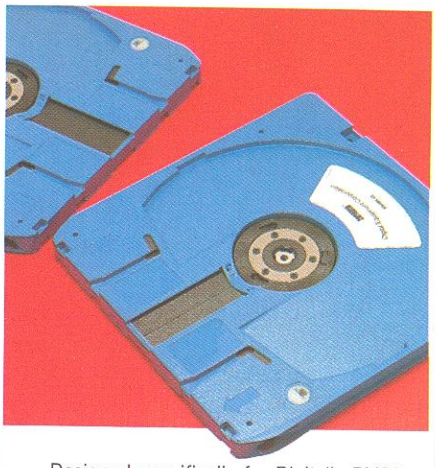


Part No.	*Description*	*Price £*
*RL02K-DC	Cartridge for RL02	195.50
RL02K-EF	Cartridge for RL02, factory error-free	289.00
*RL01K-DC	Cartridge for RL01	165.80
RL01K-EF	Cartridge for RL01, factory error-free	255.00
*RC25K-DC	Cartridge for RC25	254.20
RK06K-EF	Cartridge for RK06, factory error-free	501.50
RK07K-EF	Cartridge for RK07, factory error-free	633.30
RK05K-08	Cartridge for RK05, for PDP-8	95.20
RK05K-11	Cartridge for RK05, for PDP-11	95.20

* Includes factory installed Shockwatch Impact Detector.

Optical Cartridge

Optical technology – one 12″ disk has the capacity of up to 60 tape reels

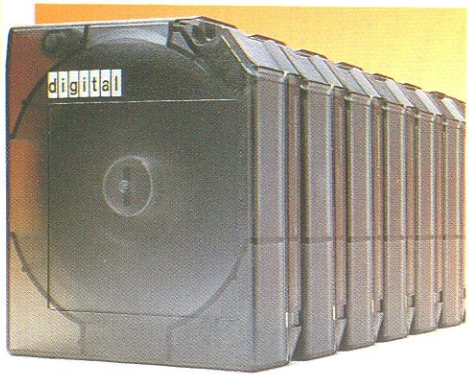


Designed specifically for Digital's RV20 and RV64 optical disk drives, this 2 Gigabyte media cartridge provides a new level of data storage. Massive storage capacity, together with the disk's small size and long life, plus outstanding durability make these optical cartridges perfect for archiving and retrieval.

Part No.	Description	Price £
RV02K-01	2 Gb Media Cartridge for RV20 and RV64	302.00
E0-RV02K-1D	**Bulk Pack** 10 × RV02K-01 – **save 12%**	2643.00

Magnetic Tape Matched to Digital Drives

100% Certified Formula One guards against head wear



Formula One is a premium quality tape for all Digital tape drives and all recording densities up to 6250 bpi. The exceptionally clean and smooth surface saves you money by reducing downtime caused by drive contamination and head wear. Quick delivery is available on all sizes shown here.

Two new cartridge tapes for the TZK10 drive, of 300 Mb and 525 Mb capacity, have recently been added to our range of magnetic media.

Part No.		Description		Price £
E0-TU058-K		TU58 DECtape 11 Minicartridge	1	21.30
E0-TUN06-C		600′ Tape in canister	1	11.30
E0-TUN06-S		600′ Tape in hanging seal	1	12.10
E0-TUN06-SL		**Bulk Pack** 10 × E0-TUN06-S - **save 11%**	1	107.20
E0-TUN12-C		1200′ Tape in canister	1	15.10
E0-TUN12-S		1200′ Tape in hanging seal	1	15.90
E0-TUN12-SL		**Bulk Pack** 10 × E0-TUN12-S - **save 10%**	1	143.50
E0-TUN24-A		2400′ Tape self thread seal	1	21.10
E0-TUN24-C		2400′ Tape in canister	1	21.90
E0-TUN24-S		2400′ Tape in hanging seal	1	21.10
E0-TUN24-SL		**Bulk Pack** 10 × E0-TUN24-S - **save 20%**	1	169.10
E0-TUN24-SA		**Bulk Pack** 50 × E0-TUN24-S - **save 25%**	1	792.80
E0-TUN24-SB		**Bulk Pack** 100 × E0-TUN24-S - **save 30%**	1	1480.00
TK25-K		600′ 60 Mb for TK25	1	27.80
E0-TK50-K		600′ × ½″ 95 Mb for TK50	1	21.90
E0-TK50K-1L		**Bulk Pack** 50 × E0-TK50-K - **save 20%**	1	875.80
E0-TK52-K		600′ × ½″ 300 Mb for TK70	1	34.00
E0-TK52K-1L		**Bulk Pack** 50 × E0-TK52-K - **save 20%**	1	1359.00
TU60-K		150′ Cassette for TU60	1	8.50
E0-TA90K-30		½″ 200 Cartridge Mb for TA90	30	188.80
E0-TA90K-1C		**Bulk Pack** (180) 6 × E0-TA90K-30 - **save 10%**	1	1019.00
E0-TA90K-1D		**Bulk Pack** (360) 12 × E0-TA90K-30 - **save 20%**	1	1812.00
E0-TA90K-1L		**Bulk Pack** (720) 24 × E0-TA90K-30 - **save 35%**	1	2945.00
TZK1X-CB	NEW	300 Mb Cartridge for TZK10	5	166.10
TZK1X-CD	NEW	525 Mb Cartridge for TZK10	5	283.10
TLZ04-CB		1.2 Gb Formatted Cartridge Tape for TLZ04	5	56.60

For other volume purchase requirements ☎ for more information.

Cartridge Storage Cabinets

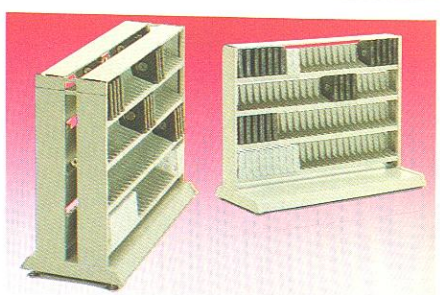
For safe storage and quick retrieval

New data cartridge storage racks provide quick and reliable storage of valuable date cartridges while at the same time offering the advantage of fast and easy retrieval.

The racks have been designed to provide a generous capacity but only take up a minimum amount of floor space.

There are two sizes available; single sided to take 100 cartridges and double sided with a capacity of 200. In addition there are single sided and double sided add-on units to provide further storage for 100 and 200 cartridges respectively.

Suitable for TK50/TK52 and TA90 Cartridges.



Dimensions	H	W	D
Single Sided:	27.6″	36.75″	14″
Single Sided Add-on:	23.5″	36.75″	4″
Double Sided:	27.6″	36.75″	14″
Double Sided Add-On:	23.5″	36.75″	9.8″

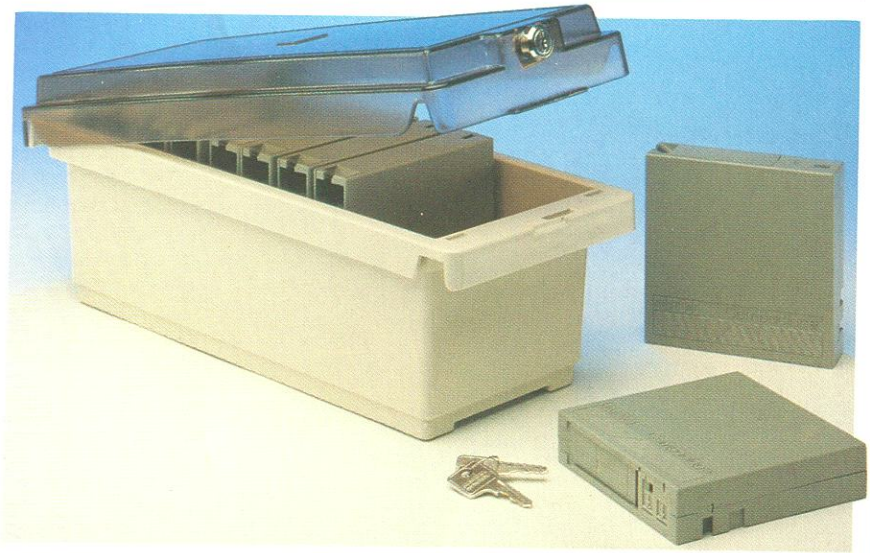
Part No.	Description	Price £
E0-TXCAB-SB	Single Sided Storage Unit, capacity 100	212.90
E0-TXCAB-SA	Single Sided Add-on Unit, capacity 100	265.00
E0-TXCAB-DB	Double Sided Storage Unit, capacity 200	351.80
E0-TXCAB-DA	Double Sided Add-on Unit, capacity 200	410.00

TK50/52 Magnetic Tape Storage Box

Avoid static – the safe way to store your data files

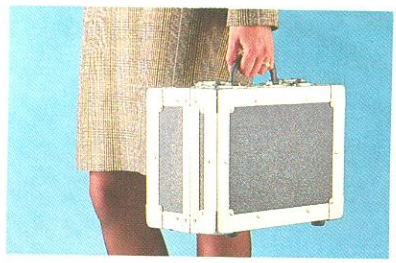
A rigid high impact plastic storage box with see-through lid. Safely holds up to 10 cassettes in low static conditions. Box is equipped with a sturdy lock to protect precious data files.

Part No.	*Description*	*Price £*
E0-TK50X-10	TK50/52 Storage Box	26.40



Removable Storage Element Carrying Case

The safe way to carry your RSEs



A carrying case that makes best use of Digital's RF30 and RF71 Removable Storage Element (RSE) disk drives.

Made especially for these Digital RSEs, the carrying case is of sturdy construction with a padded interior for safe transportation. The case is also lockable to provide maximum protection.

Part No.	*Description*	*Price £*
RFXX-CK	RSE Carrying Case	79.50

Disk Packs

The only ones for your Digital equipment

The Digital difference

Exceeds the industry-standard testing
Digital Packs are matched to Digital Drives
All Digital Disk Packs are warranted for one year against defects in material and workmanship

How to Choose Standard or Hard Error-Free Packs

If your operating systems support bad blocking, choose our economical standard (-P) disk packs. If bad blocking is not available, then choose our selected hard, error-free (-PX) packs. But please note that, in time, ordinary contamination will reduce the error-free quality.

Technical Specification

Specifications	RM03-PX	RM05-PX	RP06-PX	RA60-P	RA60-PE
Formatted Capacity	67 Mb	256 Mb	176 Mb	204 Mb	204 Mb
Storage Temperature					
Operational/ Storage Humidity				non-condensing	
Size	4″ x 15″	7″ x 15″	7″ x 15″	4″ x 15″	4″ x 15″
Shipping weight	7.73 kg	13.8 kg	13.8 kg	6.36 kg	6.36 kg
Disks	5	12	12	5	5
Data Surfaces	5	19	19	6	6
Servo Surfaces	1	1	1	0	0
Tracks p. Surface	823	823	815	1600	1600
Track Density	400″	384″	400″	779″	779″
Sectors	32/30	32/30	22/20	43	39
RPM	3600	3600	3600	3600	3600
Allowable Errors:					
Maximum	20	48	35	N/A	N/A
Unrecoverable	0	0	0	N/A	N/A

Part No.	*Description*	*Price £*
RA60-P	For RA60 Drive, for PDP-11 and VAX	660.60
RA60-PE	For RA60 Drive, for DEC10 and 20	743.80
RM03-PX	For RM03 Drive, hard error-free pack	403.80
RM05-PX	For RM05 Drive, hard error-free pack	1020.00
RP06-PX	For RP06 Drive, hard error-free pack	807.50

Section Index

134/135	Compact Tape Drives
123	Data Channels
132/133	Disk Controllers
126/132	Disk Drives
126/129	High End Disk Drives
129/132	Low to Medium Disk Drives
136/138	Memory
133	Optical Disk Drive
136	Storage Library Systems
134/135	Tape Drives
123/125	CI VAXcluster

Viewpoint

The Digital Storage Systems Interconnect (DSSI) bus was introduced just over two years ago, as a vehicle for connecting high performance storage products with high-end features to MicroVAX systems, at a reasonable cost. The first generation DSSI-based storage devices or Integrated Storage Elements (ISEs) provided new levels of multi-disk performance, mainframe-class data integrity, and multi-host support.

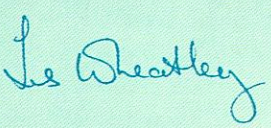
This catalogue sees the introduction of a new second generation ISE - the 1 Gb RF72. Like its predecessor, the RF31, this 5¼" full-height device has all the capabilities of the first generation ISEs, plus a much improved access time, and higher I/O performance and data transfer rates. The RF72 and RF31 ISEs also extend the high levels of reliability and data integrity that you have come to depend on from the first generation ISEs, the RF30 and RF71.

ISEs and DSSI have long offered dual-host capabilities for high system availability and multiple CPU performance. Now you can create a dual-host configuration with a combination of VAX 4000 Model 300 and/or any Q-bus MicroVAX systems.

So, with DSSI and ISEs, Digital has brought large computer data storage features out of the confines of the computer room and into the office environment, in a really cost effective way.

More good news is the availability and the extended support for the TLZ04 tape drive. Introduced with the announcement of the DECstation 5000 Model 200 and the VAX 4000 Model 300, this 4 mm DAT (Digital Audio Tape) drive can now backup 1.2 Gb of data on a wide range of RISC-based workstations, VAXstations and MicroVAX systems.

Yours sincerely



Les Wheatley
Merchandising Manager
Storage Products

CI VAXcluster

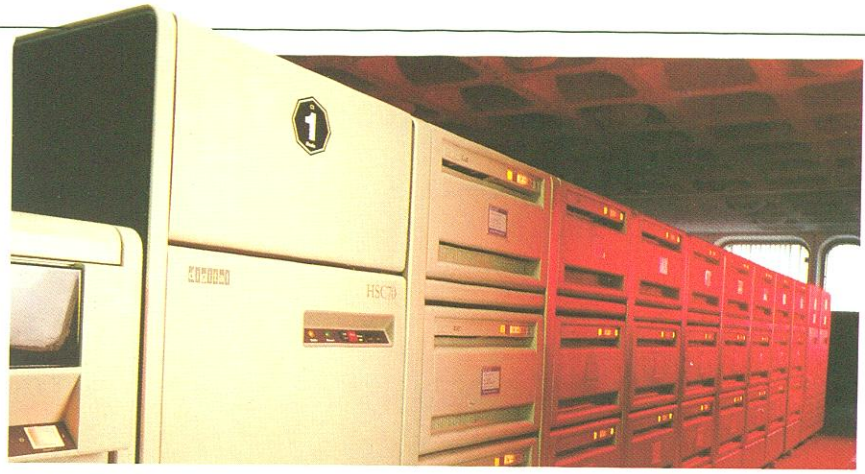
Digital's flexible approach to buying computing power

Clustering is a flexible, powerful, and cost-effective means of meeting growing computing needs. Clustering lets you add additional processors and storage subsystems without disrupting the entire system. By clustering, you can expand your computer power to almost unlimited size for significantly less than it would cost to replace your entire system or add another full system. Because you can add power and storage refinements to your existing hardware resources in direct response to changing requirements, clustering allows tremendous flexibility in planning system expansion.

What do you need to build a CI VAXcluster?

In addition to a VAX processor, and VMS VAX cluster software, a CI VAXcluster System must have at least one of each of the following components: (See fig 1)

Computer Interconnect (CI) bus
– a high performance bus connecting high-end VAX processors and mass storage controllers to the cluster. It serves as a high speed, fault-tolerant link interconnecting CI VAXcluster resources within a computer room. It provides a redundant path for data and therefore contributes to high system availability.



Star Coupler
– a common connection point for all VAXcluster nodes linked to the CI bus. Simply speaking, it is a junction box that relays signals. Star Couplers also provide redundant connection points for all CI cables from each individual node, ensuring high availability, and making it possible to physically remove any node from the cluster without affecting operation of the remaining nodes.

Localised or Hierarchical Storage Controller (HSC)
– an intelligent controller that provides cluster-wide access to mass storage resources. Digital's high end HSC connects a maximum of 32 DSA (Digital Storage Architecture) disks or up to 24 tapes or a mix of both.

CI Bus Cable Set
Connects CI adapter with star coupler, or HSC with star coupler. Each set consists of 4 CI bus cables (2 transmit, 2 receive). One set is required for connecting a CI adapter or HSC to a star coupler.

Growing your CI VAXcluster with HSC40/HSC70 Controllers

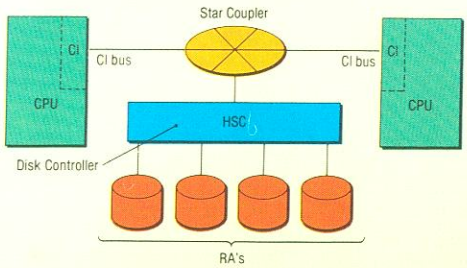
Gain greater data availability – add a second controller

Adding a second controller to your CI VAXcluster helps maximise system uptime. (See fig 2). A second controller with dual-porting helps guarantee availability of your database by providing redundant disk access, virtually eliminating vulnerability to single point failures. Adding more HSC5X data channel cards significantly improves overall cluster performance, as shown in figure 4, and further enhances availability in a system with VAX Volume Shadowing.

The HSC40 and HSC70 are intelligent, mass storage controllers specifically designed to operate in a high-performance environment. In fact, the HSC40 can manage data communications with as many as 12 disks while the HSC70 can manage an outstanding

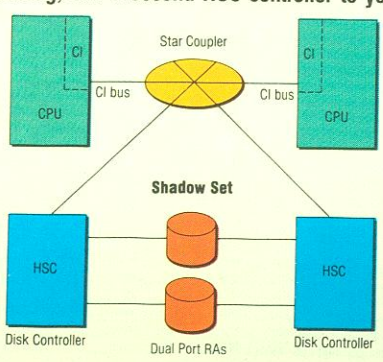
Basic CI VAXcluster — *Fig. 1*

A basic CI VAXcluster increases performance as well as providing common access to a large database.



High Availability CI VAXcluster — *Fig. 2*

This mid range CI VAXcluster uses redundant disk controllers to increase database availability. **To get the full benefit of VAX Volume Shadowing, add a second HSC controller to your system**



Dual-Port Volume Shadowing

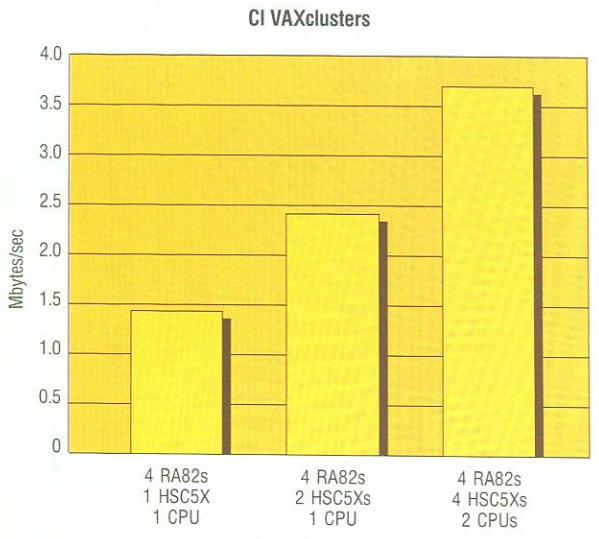
Quick Comparison Chart — Fig. 3

Use this quick comparison chart to help determine which HSC controller best suits your system requirements.

	HSC40	HSC50	HSC70
Connectivity (maximum data channels)	3	6	8
Mass storage devices (maximum)	12	24	32
Throughput (maximum I/O requests per second)	800	550	1,150
Data memory (Kbytes)	512	128	512
Program Memory (Kbytes)	1,024	256	1,024
Control Memory (Kbytes)	256	128	256
Boot/reboot Time	Approx 1 min	Approx 6 min	Approx 1 min
Processor Power	J-11 Processor	F-11 Processor	J-11 Processor
Upgrade to HSC70	Yes	No	N/A
Auxiliary Power Supply	Std with Upgrade	Optional	Included

Throughput Performance Comparison — Fig. 4

Based on results with a VAX-11/780 system, this illustration shows significantly higher I/O throughput rates achieved by adding HSC5X disk data channel cards. Digital recommends spreading heavily accessed disks across multiple channel cards. As the diagram shows, four cards provided greater throughput than could be used efficiently with only one CPU. A second CPU was added to maximise overall system performance.



32 disks. Both these powerful controllers feature overlapping disk seeks, simultaneous data transfers, and command queuing of I/O requests – all of which ensures maximum system throughput. In addition, the on-board memory and internal processors handle many of the I/O functions which are traditionally performed by the main CPU in a conventional system.

Which controller is best for you?

The size of the CPUs in your CI VAXcluster system and the system application are the primary factors that determine whether the HSC40 or HSC70 is better for your needs. (See fig 3).

HSC40

The HSC40 is the entry level HSC controller, ideal for those who may require the power of the HSC70 in the future but do not initially need the connectivity offered by the HSC70.

- **Connectivity**
  Up to 3 data channels or 12 mass storage devices
- **High Performer**
  Throughput of up to 800 I/O requests/second
- **Upgrade**
  Field upgradeable to the HSC70

HSC40 to HSC70 Upgrade Kit

The HSC7X-AB kit upgrades the HSC40 controller to full HSC70 specification.

You get all the increased processing power and greater connectivity of the HSC70 while protecting your original investment.

- **Greater Connectivity**
  From 3 to up to 8 data channels.
  From 12 to 32 mass storage devices.
- **Increased Processing Power**
  Increases I/O requests per second by over 40% from 800 to 1150.

HSC70

The HSC70 controller is intended primarily for larger CI VAXcluster or standalone clusterable CPUs.

- **Greater Connectivity**
  Up to 8 data channels or 32 mass storage devices
- **Increased Processing Power**
  To efficiently handle over twice as many I/O requests as the HSC50 – 1150 I/O per second throughput

Higher data availability with faster response time

VAX Volume Shadowing is a software feature for CI VAXclusters. As the name implies 'Shadowing' means following or duplicating the image of something else. In this case, that 'something else' is the information stored on your RA disks. To use CI based VAX Volume Shadowing, you need an Hierarchical Storage Controller (HSC), two or more Digital Storage Architecture (DSA) disk drives, and at least one VAX processor.

HSC50 to HSC70 Trade-in Programme

If you already have the HSC50 and want to order the higher capacity HSC70 – take advantage of our Trade-in Programme.

Ring for details

Guide to installation symbols

- **I** — *Free installation by Digital*
- **C** — *Designed to be installed by customers*
- **C O** — *Designed to be installed by customers Free assistance given if required*

Here are definitions of some of the terms commonly used in VAX Volume Shadowing:

Shadow set – two or more disks on which data is duplicated.

Member – one of the disks containing the duplicate data.

Availability – In general terms, is the amount of time during which a system is running according to specification.

Exposure – is the amount of time in which your data is contained on only one disk. VAX Volume Shadowing virtually eliminates exposure because the same data is contained on more than one disk.

VAX Volume Shadowing protects your data and increases its availability through redundancy

CI based VAX Volume Shadowing uses two or more RA series disk drives, storing an exact copy of the data on each of the drives. These identical copies are automatically created and maintained by the HSC controller without user intervention. Using VAX Volume Shadowing with two disks in conjunction with two HSCs improves availability 256 times over a system which consists of only one disk and one HSC.

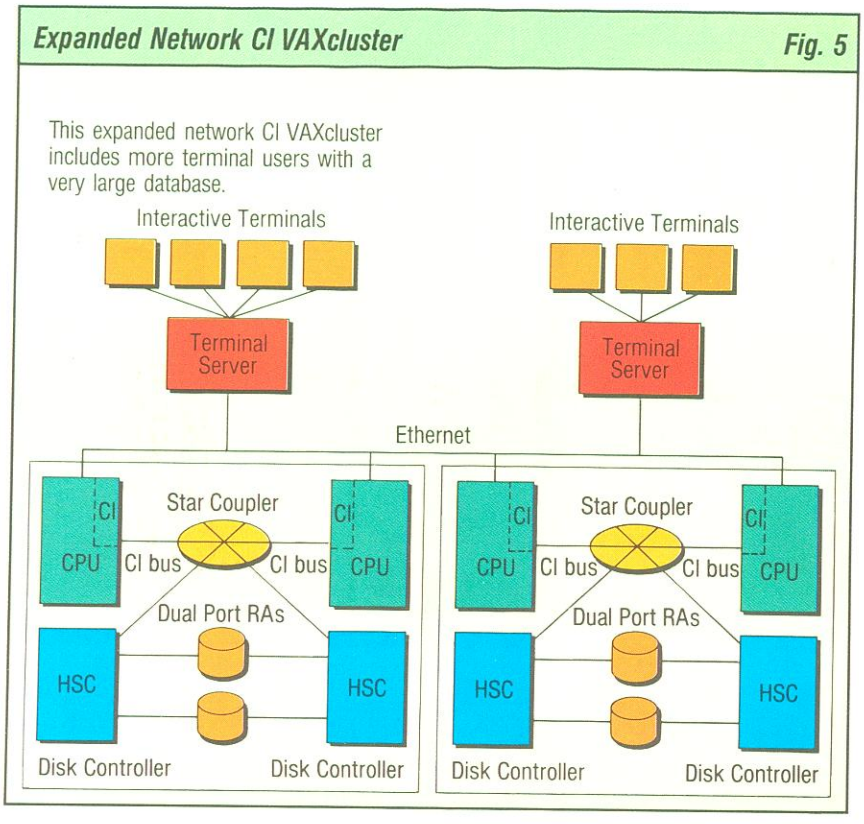
Data loss due to a drive or controller failure is virtually eliminated

For maximum data availability and protection, shadow sets can be connected to adjacent HSC nodes in 'dual port' fashion. If a drive member should fail, your system can continue to operate on the alternative drive(s) without interruption. Read/write access to the original shadow member continues while a new member is being added. The data on the new member is made identical to the data on the original drive member in a minimal amount of time. Individual drive members can even be swapped in or out of the shadow set at any time without interrupting the system. If you can't afford to lose data, or you don't want to be denied access to your data for even a short period of time, then VAX Volume Shadowing is for you.

Improved disk system performance

Because identical data is stored on multiple drives, the drive whose read head is closest to the requested data responds first, resulting in faster system response in applications which have heavy read requirements. Up to 70% performance gains are possible with no additional CPU overhead.

Expanded Network CI VAXcluster — *Fig. 5*



Data is protected from loss due to normal media deterioration

When normal media deterioration renders a volume unreadable, systems with VAX Volume Shadowing read the duplicate data and restore the data to the failed volume.

VAX Volume Shadowing software supports a maximum of sixteen shadowing disks per HSC series controller

(per pair of HSC series controllers if the disks are dual-pathed). Here are some of the configurations possible under the new support guidelines:

- 8 shadow sets of 2 members each
- 5 shadow sets of 3 members each
- 4 shadow sets of 3 members each plus 2 shadow sets of 2 members each

Part No.		Description	Price £
HSC40-AB	ⓘ D	Base HSC40 Unit*	28310.00
HSC70-AB	ⓘ D	Base HSC70 Unit*	44920.00
HSC5X-DA	ⓘ	Disk or Tape Data Channel#	8305.00
HSC5X-EB	ⓘ	Supplementary Power Supply. Required when more than 2 Channel Cards in HSC50	2265.00
HSC7X-AB	ⓘ	HSC40 to HSC70 Upgrade Kit (240V)	19630.00
E0-BNCIA-10		CI Cable Set, 33 ft (10 m)†	365.70
E0-BNCIA-20		CI Cable Set, 66 ft (20 m)†	508.80
E0-BNCIA-45		CI Cable Set, 148 ft (45 m)†	914.30

* Requires One E0-BNCIA cable set, note: HSC5X-DA data channels not included.
† One set is required for connecting a CI adapter or HSC to a star coupler.
# Disk and tape drives cannot be connected to the same HSC5X-DA.

High end disk drives

There are many advantages in choosing Digital disks

All products carry the Digital 12 months free warranty; are backed by an extensive service and support network, and are 100% DSA and DSDF compliant.

The disk drive capacities quoted are always the formatted or usable capacities, so you know what you're buying.

All RA series disk drives have dual porting as standard; they are all radially and directly connected to DSA/SDI controllers, giving increased disk availability and, eliminating the overheads associated with converters and adapters.

RA92

No 1 disk drive for capacity

The RA92 is Digital's highest capacity disk drive. It has a formatted capacity of 1.5 Gb and further extends the wide range of high end disks that are currently available.

The RA92 is a component drive of the new SA800/SA850 Storage Arrays and the RA92 storage units. It offers all the features and benefits of the RA90 along with high capacity and reliability and, an overall performance increase at a lower cost per Mb.

RA90

Compact, high capacity disk drive

The RA90 is a 1216 Mb formatted capacity disk drive using advanced thin film heads and 9″ plated media. It can be installed into SA600 and SA650 Storage Arrays and the RA90 storage units.

Although requiring only half the physical space that the RA82 occupies, the RA90 has twice the capacity.

RA82

A highly versatile entry level disk drive

The RA82 offers 622 Mb of formatted capacity and can be installed into a variety of cabinets as well as the SA482 and SA550 Storage Arrays. It occupies the same physical space as the RA81 but has over 30% more capacity.

RA70

Compact, high performance disk drive

With a formatted capacity of 280 Mb on 5¼″ media, the RA70 is the component drive of the high performance SA70 and SA705 storage arrays. Additional RA70s can be installed in existing systems and arrays to provide incremental capacity.

Storage Arrays

Suits today's needs and, with upgrading, your future needs

The fixed disk Storage Array family consists of several options based on either 40″ or 60″ high cabinets. These Storage Arrays occupy only 5.5 sq ft of floor space and are pre-configured to take various combinations of RA82, RA90, RA92 or SA70s. The SA70 is itself a Storage Array; it occupies the same physical space as the RA90/RA92 drives, and can be installed into the SA550/ SA650 and SA850.

Digital also offers a high-performance Removable Storage Array – the SA705. It is packaged in a 60″ cabinet and provides up to 4.4 Gb of storage. Based on the RA70 disk drive, the SA705 represents a major advance in managing, and securing data in a computer room environment. The SA705 is not currently available through this catalogue but please ☎ for more information.

Storage Arrays are available in a variety of configurations. They range from fully configured, with no free slots, to single drive arrays with up to seven free slots. The partially populated arrays will suit your immediate needs and allow easy upgrading by the addition of further drives as required.

Now with this wide range of Storage Arrays you can choose the one most suited to your requirements.

Homogeneous Storage Arrays

Low cost per Mb

The SA482, SA600 and SA800 Storage Arrays as well as the RA90 and RA92 storage units, are all intended for systems that require storage capacity at a low cost per Mb. These units and arrays are also ideally suited to applications where disk performance bottlenecks have not been identified.

SA800

25% extra capacity at a lower cost per Mb

The SA800 Storage Arrays can contain up to 8 RA92 disk drives to provide a maximum capacity of 12 Gb; that is well over 2 Gb of storage per square

foot of floor space. These new Storage Arrays offer all the features and benefits of the corresponding SA600s, plus 25% extra capacity at an improved price per Mb. Buy two fully populated Arrays under the option number SA800-LD and price per Mb is even more attractive. The maximum throughput of the SA800 in a timeshare environment at 100 ms response time, is 408 I/O requests per second. The SA800 is supported by VMS V5.3-1 and ULTRIX V4.0

SA600

High capacity/cost effective

The SA600 Storage Array can contain up to 8 RA90 disk drives for a maximum capacity of 9.7 Gb and maximum throughput of 370 I/O requests per second.

RA81/82 to RA90/92 Trade-in Programme

Need extra storage capacity? Want to save on power costs and floor-space? Then migrate to the high capacity RA90 series disk drives and receive a generous credit for your RA80 series too.
Ring for details.

RA92

Now – 9 Gb in one 40″ cabinet

The RA92 storage units can contain up to six RA92 disk drives to provide a maximum capacity of 9 Gb and a maximum throughput of 305 I/O requests per second.

These units are the ideal solution for MicroVAX 3900 and DECsystem 5400 users who wish to migrate to the higher capacity RA92 disks but, are unable to mount the drives within their system cabinet.

RA90

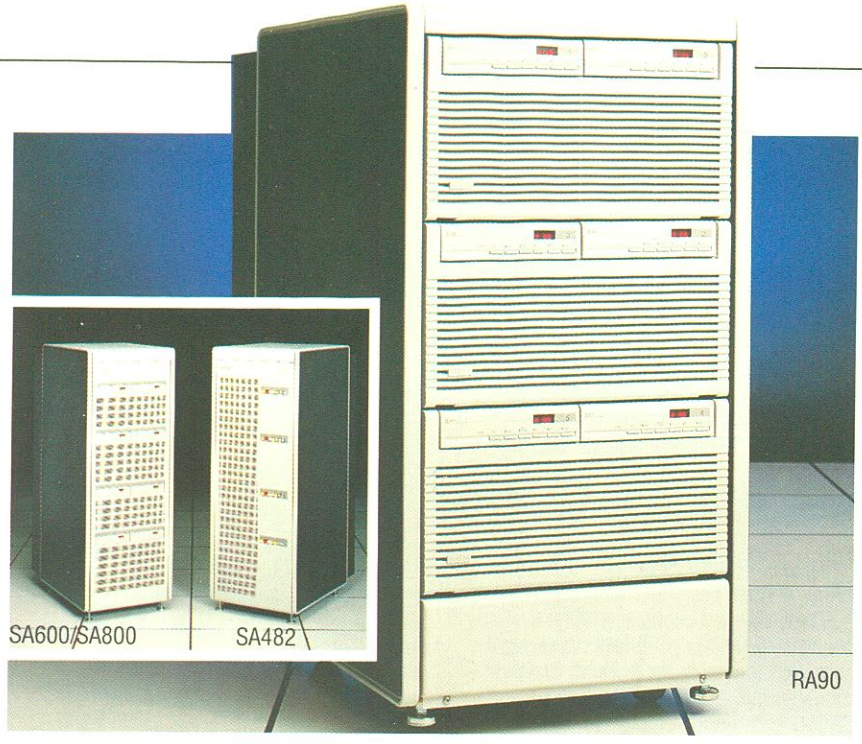
High capacity in 40″ cabinet

The RA90 storage unit can accommodate up to six RA90 disk drives to give a maximum capacity of 7.3 Gb.

SA482

Entry level capacity/low cost

The SA482 Storage Array can contain up to 4 RA82 disk drives to provide a maximum capacity of 2.5 Gb and a maximum throughput of 160 I/O requests per second.

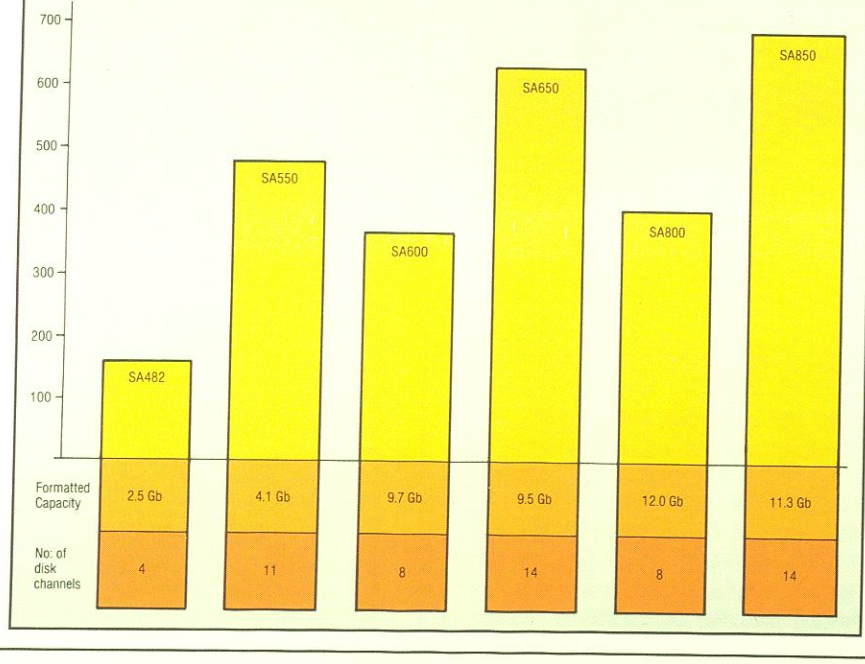


RA series Disk Drives, at a glance

	RA82	RA70	RA90	RA92
Formatted capacity, Mb	622	280	1216	1506
Peak transfer rate, Mb/s	2.4	1.4	2.8	2.8
Average seek time, ms	20	19.5	18.5	17
Rotational latency, ms	8.3	7.5	8.3	8.8
Average access time, ms	28.3	27	26.8	25.8
Form Factor, inches	14	5.25	9	9

Storage Array Performance

I/O sec at 100 ms response time



Mixed Drives Storage Arrays

Combinations of drives for optimum performance

The SA550, SA650 and the new SA850 Storage Arrays are based on the SA482, SA600 and SA800 respectively, but the top position in these Arrays can accommodate up to 2 SA70s. The mixed drive Storage Arrays are intended for systems that require a combination of disk drives in order to optimise performance and capacity.

SA70

High performance/multiple spindles

The SA70 is a Storage Array that consists of RA70 disk drives. These are packaged to enable them to be easily mounted into the top of the SA550, SA650 and SA850 Storage Arrays. The SA70 occupies the same physical space as the RA90 series disks but, has up to four separate spindles. It can therefore be configured to optimise I/O performance by distributing frequently accessed files over multiple smaller spindles. A fully configured SA70 has a capacity of 1.1 Gb.

SA850

The new No 1 for performance – extra capacity too

Digital's SA850 storage arrays provide both high performance and high capacity in the same 60" cabinet. An SA850 can contain up to 2 SA70s and 6 RA92s to provide a maximum capacity of 11.3 Gb and a maximum throughput of 674 I/O requests per second (in a timeshare environment at 100 ms response time).

SA650

High capacity/high performance

The SA650 Storage Array can contain up to 2 SA70 Storage Arrays and up to 6 RA90 disk drives for a maximum capacity of 9.5 Gb and maximum throughput of 640 I/O requests per second.

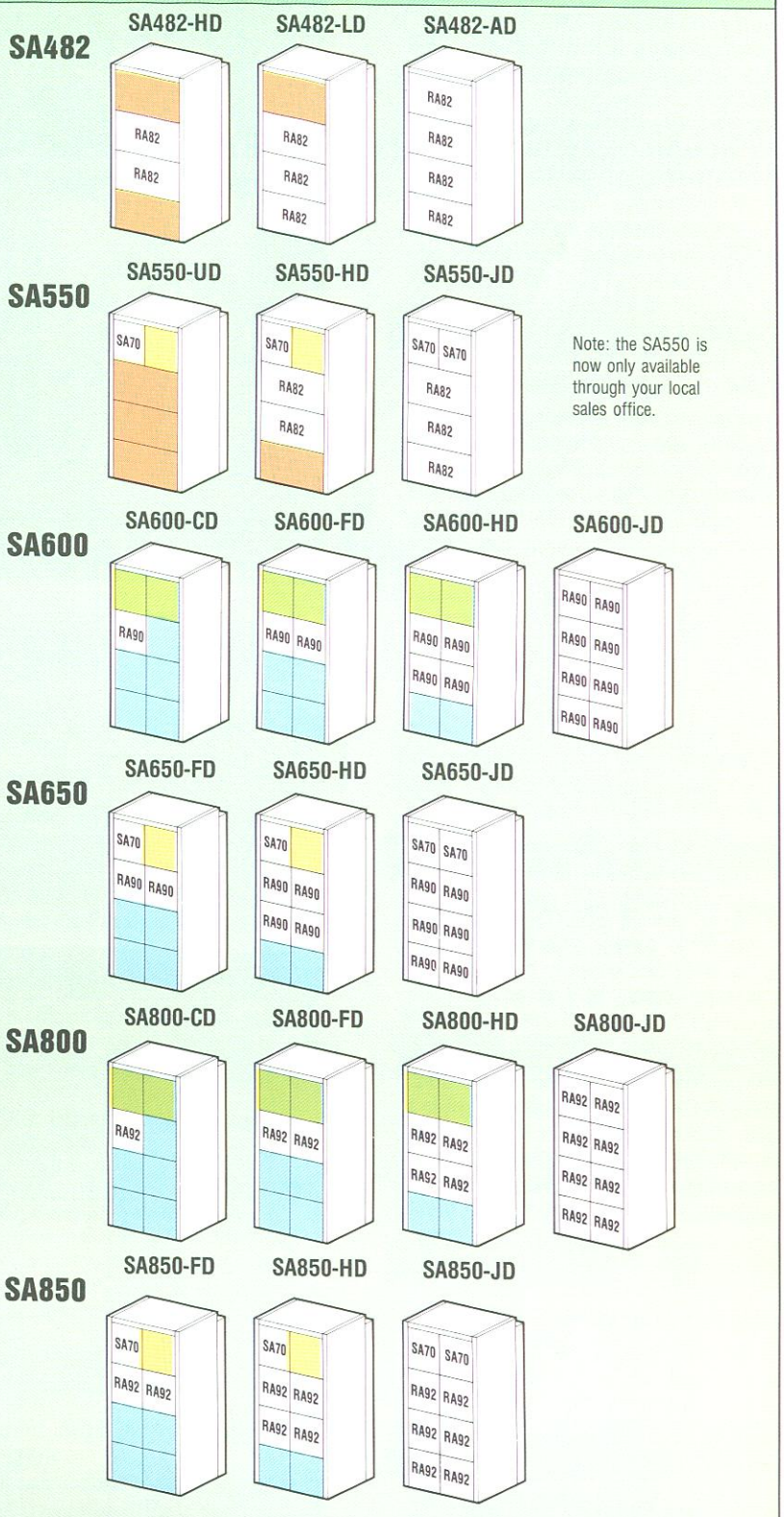
SA550

High performance/entry level capacity

The SA550 Storage Array can contain a maximum of 2 SA70s and 3 RA82 disks for up to 4.1 Gb and 485 I/O requests per second.

Note: the SA550 is now only available through your local sales office.

SA Configurations – Illustrates slots for future expansion



SDI Cables

12 foot SDI cables are included with the SA482 and the RA82 options to connect the RA disk drive to the controller. If required, different length cables can be ordered.

SDI cables are not required for the RA70E-SF. All other storage array options require an SDI cable per disk drive (2 cables if dual porting).

Note: as an SA70-JK consists of 4 RA70s, it requires at least 4 SDI cables. Similarly the SA70-HK will require at least 2 SDI cables.

For information on controllers refer to page 132.

Use VAX Performance Advisor to streamline system performance

VAX Performance Advisor (VPA) can now pinpoint your most frequently used files. To balance the I/O workload, avoid bottlenecks and improve system throughput, you can migrate those files to the rapid-access RA70 disk drives within the SA70.
Ring for details.

Part No.		*Description*	*Price £*
Add-on Disks			
RA70E-SF	I	280 Mb 5 ¼″ Disk	7650.00
RA82-AD	I	622 Mb 14″ Disk	10570.00
RA90-NA	I	1.2 Gb 9″ Disk	18880.00
RA92-NA	I	1.5 Gb 9″ Disk	18120.00
SA70-HK	I	560 Mb Add-on Storage Array (2 RA70 Disks)	15100.00
SA70-JK	I	1.1 Gb Add-on Storage Array (4 RA70 Disks)	27180.00
Storage Units			
RA82-CD	I D	622 Mb Storage Unit (1 RA82 Disk, 40″ Cab)	10570.00
RA90-CD	I D	1.2 Gb Storage Unit (1 RA90 Disk, 40″ Cab)	20760.00
RA92-CD	I D	1.5 Gb Storage Unit (1 RA92 Disk, 40″ Cab)	21140.00
Storage Arrays			
SA482-AD	I D †	2.5 Gb Storage Array (4 RA82 Disks, 60″ Cab)	41040.00
SA482-HD	I D	1.2 Gb Storage Array (2 RA82 Disks, 60″ Cab)	21140.00
SA600-CD	I D	1.2 Gb Storage Array (1 RA90 Disk, 60″ Cab)	20760.00
SA600-FD	I D †	2.4 Gb Storage Array (2 RA90 Disks, 60″ Cab)	38880.00
SA600-HD	I D †	4.8 Gb Storage Array (4 RA90 Disks, 60″ Cab)	74750.00
SA600-JD	I D †	9.7 Gb Storage Array (8 RA90 Disks, 60″ Cab)	142700.00
SA650-FD	I D	3.5 Gb Storage Array (4 RA70, 2 RA90 Disks, 60″ Cab)	66060.00
SA650-HD	I D †	5.9 Gb Storage Array (4 RA70, 4 RA90 Disks, 60″ Cab)	101900.00
SA650-JD	I D †	9.5 Gb Storage Array (8 RA70, 6 RA90 Disks, 60″ Cab)	161400.00
SA800-CD	I D	1.5 Gb Storage Array (1 RA92 Disk, 60″ Cab)	21140.00
SA800-FD	I D †	3 Gb Storage Array (2 RA92 Disks, 60″ Cab)	38510.00
SA800-HD	I D †	6 Gb Storage Array (4 RA92 Disks, 60″ Cab)	73990.00
SA800-JD	I D	12 Gb Storage Array (8 RA92 Disks, 60″ Cab)	145000.00
SA800-LD	I D	2 SA800-JD Storage Arrays (16 RA92 Disks, 2 60″ Cabs)	263500.00
SA850-FD	I D †	4.1 Gb Storage Array (4 RA70, 2 RA92 Disks, 60″ Cab)	65690.00
SA850-HD	I D †	7.1 Gb Storage Array (4 RA70, 4 RA92 Disks, 60″ Cab)	101200.00
SA850-JD	I D †	11.3 Gb Storage Array (8 RA70, 6 RA92 Disks, 60″ Cab)	154900.00
CK-SA70-AA	I	SA70 Hardware Upgrade Kit for SA600/SA800	3640.00
SDI Cables			
EO-BC26V-12		3.7 m (12′) Shielded SDI Cable	182.90
EO-BC26V-25		7.6 m (25′) Shielded SDI Cable	318.00
EO-BC26V-1L		**Bulk Pack** 4 × EO-BC26V-25 – **save 22%**	993.80
EO-BC26V-50		15.2 m (50′) Shielded SDI Cable	445.20
EO-BC26V-80		24.4 m (80′) Shielded SDI Cable	612.20

Important Note: all four high storage arrays require a 3-phase electrical supply. Call technical support if you require more information.

† Storage arrays may be supplied as base building blocks and additional disk drives as appropriate; e.g. the SA800-FD may be supplied as a SA800-CD with an additional RA92-NA drive. Prices will be that of the part ordered.

Low to medium disk drives

Storage solutions for Desktop and Desk-side environments

RZ Family

Designed for Digital's industry-standard Small Computer System Interface (SCSI) based workstations

Workstation users demand high performance and high storage capacity along with quality and dependability. In addition, desktop locations require storage solutions that are quiet, compact, and efficient in power consumption.

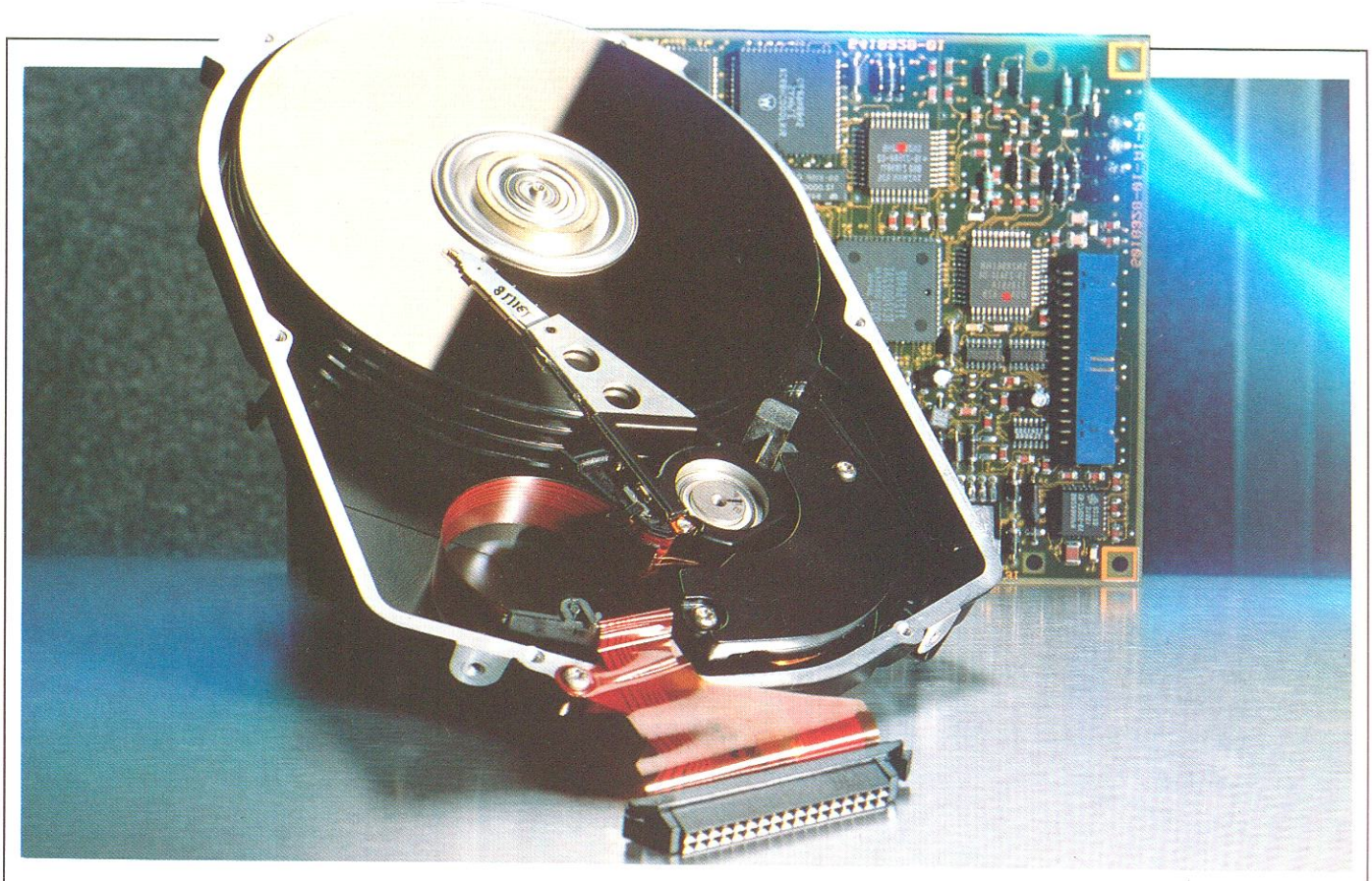
RZ disk drives are available in both 3½″ (RZ23, RZ24) and 5¼″ (RZ55, RZ56, RZ57) formats. The RZ23 (104 Mb) and the RZ24 (209 Mb) are internal system devices, while the larger RZ55 (332 Mb), RZ56 (665 Mb) and the RZ57 (1 Gb) disks are mounted in expansion boxes. Choosing the appropriate drive for your particular application or system configuration is becoming more challenging. The large capacity drives (RZ56, RZ57) with a high transfer rate, are ideal for the primarily large file technical applications in the single-user workstation environment. A multi-user system, with typically small file, office automation or commercial applications, needs high I/O performance rather than high capacity. This can be best achieved by using multiple, smaller capacity drives like the RZ23, RZ24 and RZ55.

All of Digital's SCSI disks are manufactured to an industry-leading level of quality, reliability and data integrity. They are, also, compatible with, and optimised for, all Digital's SCSI workstations.

Beyond incorporating 48 bit Error Correction Code (ECC), RZ drives feature write/read diagnostic capabilities and improved integration with Digital's workstation diagnostics. These enable the system user to see problems develop and take corrective action, thus preventing loss of data.

Reliability is further enhanced by exceptional tolerance to shock, temperature, and vibration – ideal for the desktop environment.

RZ disk components are field replaceable. A drive's circuit board can be replaced on site without disturbing data



stored on the disks – ensuring high system availability.

RX Family

Dual mode saves time and effort

Digital's RX floppy disk drives provide low cost, removable data storage and, access to a wide range of industry-standard software applications.

The RX23 ($3\frac{1}{2}$", 1.44 Mb) and RX33 ($5\frac{1}{4}$", 1.2 Mb) drives, which both operate in high and standard density mode, are now available as embedded options and in table top enclosures.

Either one RX23 or one RX33 can be mounted in the SZ12 expansion boxes. These dual-drive, table top enclosures, used to house SCSI storage options, are supported on RISC workstations, VAXstations and MicroVAX 3100 systems.

RD Family

High reliability with low cost

The RD family of disk drives protects your computing investments by conforming to the proven Digital Storage Architecture (DSA).

They are the ideal storage solution for MicroVAX II users when lower cost, rather than high capacity and performance, is the main criterion.

Trade-in an RD for an RF
Please ☎ and ask for Trade-in details.

RF Family

Brings high level, multi-disk performance to small systems

The new RF72 Integrated Storage Element (ISE) is the latest addition to the second generation of RF series storage devices. Designed and manufactured by Digital, this 1 Gb, $5\frac{1}{4}$" ISE and the 381 Mb, $3\frac{1}{2}$" RF31 offer all the capabilities of the first generation options, plus a 30% faster access time and a 33% higher transfer rate. A four-track, 128 Kb read-ahead cache can dramatically reduce response time too.

The first generation ISEs, the RF30 and RF71, provide excellent multi-drive performance, and the ability to create dual-host configurations for very high availability storage sub-systems. Both these features are incorporated in the RF72 and RF31 ISEs, plus a 30% performance improvement in single drive applications, and additional data security features to increase data availability.

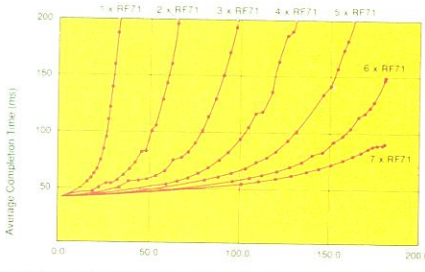
ISEs are more than just disk storage devices. Each disk drive has an integrated, dedicated, intelligent controller and Mass Storage Control Protocol (MSCP) server. Powerful small systems such as the VAX 4000 Model 300 and Q-bus MicroVAX 3000 series systems demand disk I/O performance in proportion to their processing power. With its dedicated controller, the ISE brings this higher level of multi-disk performance required in the small systems environment.

ISEs are used in conjunction with the Digital Storage Systems Interconnect (DSSI) and host adapters, which gives the capability to connect up to seven ISEs (per DSSI path) and one host computer – or six shared ISEs (per DSSI path) and two host computers – into a single configuration. The number of DSSI paths available will depend on the number of adapters that are supported in your system. For example, a VAX 4000 Model 300 supports up to four adapters, the MicroVAX 3000 series a maximum of two.

The embedded controllers and dedicated data channels allow multiple ISEs to achieve full, simultaneous I/O operation. This means that throughput and data bandwidth increase linearly with the number of devices installed, and large system I/O performance can be achieved in cost-effective, compact configuration.

RF series storage devices can be installed within your system enclosure or,

RF71 Performance Graph



Performance increase when connecting additional RF71s

as is necessary with all MicroVAX II systems, in a choice of expansion boxes. The new R400X storage expansion pedestal will house up to seven ISEs with special mounting hardware (RF**E-A*), or six of these ISEs and a TLZ04 DAT tape back-up device. This enclosure can be configured with two, separate DSSI buses. It can therefore be shared by, for example, two standalone VAX 4000 Model 300 systems. Alternatively, the RF**B-** storage expanders can be installed. These BA215-type enclosures have spaces for up to three RF**E-S* ISEs (for appropriate part numbers, please see tint panel on page 132).

Full Digital Storage Architecture (DSA) compliance by all ISEs ensures investment protection, and VAXsimPLUS support provides maximum availability on your storage sub-system. VMS Volume Shadowing Phase II software will further increase availability and enhance performance.

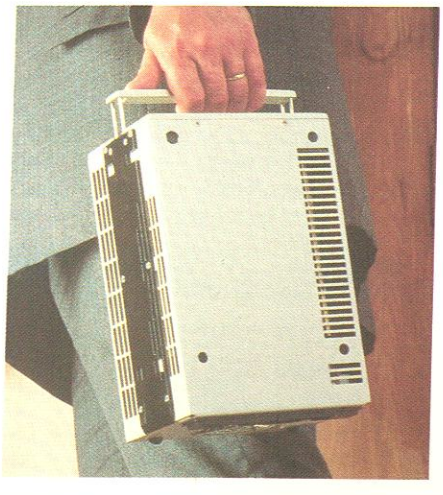
RF Removable Storage Elements (RSEs)

Easily removable storage – when security matters

The RF series of Removable Storage Elements (RSEs) is the answer to safekeeping of sensitive data. When security dictates that storage is kept away from your system configuration, you need a device that is both removable and portable. That is exactly what the RSEs are.

RSEs are Integrated Storage Elements (ISEs) enclosed in a protective canister for ease of removal and convenience of carrying. They are mounted in modified BA23 pedestals which have slots for two RSEs, and are suitable for use in an open office environment. Each slot in the pedestal is fitted with a key lock for additional security.

The RSE has all the capabilities of the ISE and so provides a level of performance, availability and reliability not found in removable media devices. Additionally, the portability of the RSE adds greater flexibility to your system and allows you to place and use data on any system with a suitable RSE enclosure.



Dual-host systems

Higher availability for all Q-bus MicroVAX configurations

A dual-host configuration comprises any combination of two Q-bus MicroVAX or VAX 4000 Model 300 systems connected by a DSSI storage bus. These dual-host systems have similar advantages to the CI VAXcluster, but at a significantly lower price. In the Local Area VAXcluster (LAVC), each host can be a boot member. If one of these boot members fails, all connections between the satellite members and that boot member failover to the remaining boot member. So applications running on the satellite members continue to run without interruption.

Dual-host systems also provide much greater availability than a standalone system – an important consideration for users with applications requiring the advantages of the CI VAXcluster in the VAX 4000 and MicroVAX price/performance range.

R400X-B9

Inherent in the design of ISEs is a unique multi-host support capability which allows them to be shared simultaneously by up to two hosts. This feature, combined with VAXsimPLUS, dramatically increases data and system availability to meet the demands of business-critical applications.

Disk Drive families at-a-glance

	RZ23	RZ24	RZ55	RZ56	RZ57	RX23	RX33	RD54	RF30	RF31	RF71	RF72
Formatted capacity, Mb	104	209	332	665	1000	1.44	1.2	159	150	381	400	1000
Peak transfer rate, Mb/s	1.25	1.5	1.25	1.875	2.2	–	–	0.625	1.5	2.0	1.5	2.0
Average seek time, ms	25	16	16	16	14.5	94	92	29.7	21	16	21	13.9
Rotational latency, ms	8.3	8.3	8.3	8.3	8.3	100	83.0	8.3	8.3	8.3	8.3	8.3
Average access time, ms	33.3	24.3	24.3	24.3	22.8	194	175	38	29.3	24.3	29.3	22.2
Form Factor, inches*	3.5HH	3.5HH	5.25FH	5.25FH	5.25FH	3.5HH	5.25HH	5.25FH	5.25HH	5.25HH	5.25FH	5.25FH

* HH = Half Height FH = Full Height

Part No.		Description	Price £
R400X-B9	i	Storage Expansion Pedestal	1785.00
RD54-EA	i	159 Mb Disk (ST 506) for MicroVAX 2000/ VAXstation 2000	3935.00
RD54-F3	D†	159 Mb Disk (ST 506) in Expansion Box for MicroVAX 2000/VAXstation 2000	5048.00
RD54A-BA	i	159 Mb Disk (ST 506) and Cables for BA123	3935.00
RF30-RA	C	150 Mb RSE	3458.00
RF30B-DB	i	150 Mb ISE in Expansion Pedestal	3299.00
RF30B-KB	i	150 Mb RSE in Expansion Pedestal, DSSI Cable	5684.00
RF30E-SF	i	150 Mb ISE for BA200 Series Enclosures	2584.00
RF31B-DB	i	381 Mb ISE in Expansion Pedestal	5486.00
RF31E-AF	i	381 Mb ISE for BA400 Series Enclosures	4770.00
RF31E-SF	i	381 Mb ISE for BA200 Series Enclosures	4770.00
RF71-RA	C	400 Mb RSE	7632.00
RF71B-KB	i	400 Mb RSE in Expansion Pedestal, DSSI Cable	9858.00
RF71E-SF	i	400 Mb ISE for BA200 Series Enclosures	6758.00
RF72B-DB	i NEW	1 Gb ISE in Expansion Pedestal	10260.00
RF72E-AF	i NEW	1 Gb ISE for BA400 Series Enclosures	9540.00
RF72E-SF	i NEW	1 Gb ISE for BA200 Series Enclosures	9540.00
RX23-UK	C	1.44 Mb Floppy Disk Drive Upgrade for SZ12 Expansion Box	477.00
RX33-UK	C	1.2 Mb Floppy Disk Drive Upgrade for SZ12 Expansion Box	477.00
RZ23-EF	i	104 Mb Internal Disk (SCSI) for VAXstation 3100 (Models 30/40/48)/MicroVAX 3100)	1193.00
RZ23-EH	D	104 Mb Internal Disk (SCSI) for VAXstation 3100 (Model 38/76)	1193.00
RZ23-FF	i	104 Mb Internal Disk (SCSI) for DECstation 2100/ DECstation 3100	1193.00
RZ24-EF	i	209 Mb Internal Disk (SCSI) for VAXstation 3100 (Models 30/40/48)/MicroVAX 3100)	1988.00
RZ24-EH	D	209 Mb Internal Disk (SCSI) for VAXstation 3100 (Model 38/76)	1988.00
RZ24-FF	i	209 Mb Internal Disk (SCSI) for DECstation 2100/ DECstation 3100	1988.00
RZ55-UK	C	332 Mb Disk Drive Upgrade for SZ12 Expansion Box	2783.00
RZ56E-AF	i NEW	665 Mb Disk (SCSI) for BA400 Enclosures	3896.00
RZ56-UK	C	665 Mb Disk Drive Upgrade for SZ12 Expansion Box	3896.00
RZ57E-AF	i NEW	1 Gb Disk (SCSI) for BA400 Enclosures	5565.00
RZ57-UK	C	1 Gb Disk Drive Upgrade for SZ12 Expansion Box	5565.00
SZ12A-AB*	C	2 × RZ55 332 Mb Disks (SCSI) in SZ12 Expansion Box	5963.00
SZ12A-XB	C	RZ55 332 Mb Disk (SCSI) in SZ12 Expansion Box	3180.00
SZ12B-BB*	C	2 × RZ56 665 Mb Disks (SCSI) in SZ12 Expansion Box	8189.00
SZ12B-XB	C	RZ56 665 Mb Disk (SCSI) in SZ12 Expansion Box	4293.00
SZ12C-CB*	C	2 × RZ57 1 Gb Disks (SCSI) in SZ12 Expansion Box	11530.00
SZ12C-XB	C	RZ57 1 Gb Disk (SCSI) in SZ12 Expansion Box	5963.00
SZ12X-LB	C	RX23 1.44 Mb 3½" Floppy Drive in SZ12 Expansion Box	874.50
SZ12X-MB	C	RX33 1.2 Mb 5¼" Floppy Drive in SZ12 Expansion Box	874.50

* SZ12 Expansion box options may be supplied as single drive options plus the appropriate upgrade kit, e.g. the SZ12A-AB may be supplied as an SZ12A-XB with an RZ55-UK.

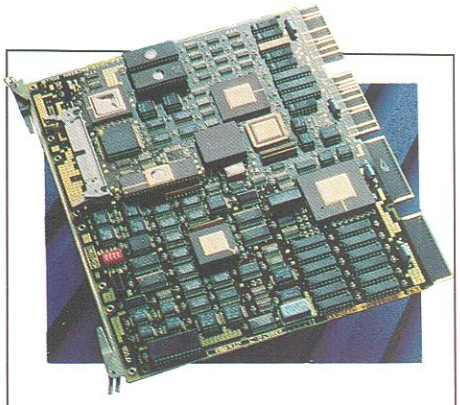
† Requires BA40A-AA with VAXstation 2000 systems.

Guide to installation symbols

- i — *Free installation by Digital*
- C — *Designed to be installed by customers*
- D — *Designed to be installed by customers Free assistance given if required*

Storage Applications

For more information about which products these storage systems can be used with, see page 19.



Controllers

Digital's controllers move information faster

KDM70

Digital's most powerful DSA backplane controller

The KDM70 is a DSA (Digital Storage Architecture) intelligent controller for RA series disks and storage arrays, TA series tape drives and ESE20 solid state disks which plugs directly into the XMI backplane of the VAX 6000 and VAX 9000 systems.

It has eight ports (any two of which may be used for tapes), two data channels, supports a request rate up to 700 I/O requests-per-second and a sustained data rate of 4.0 Mbs (2 ESE20s) or 3.4 Mbs (2 RA90s).

The KDM70 is the ideal controller for both the TA90 and ESE20 in a non-clustered system with a much lower implementation cost than the CI/HSC alternative. Its high data rate, too, makes it the ideal choice when disk striping is implemented for high bandwidth applications such as seismic exploration and data acquisition.

A KDM70 is a two board configuration which occupies two adjacent XMI backplane slots and requires VMS V5.3-1. TA90 V2.2 microcode is required for KDM70 support.

KZQSA

New

Links TLZ04/RRD40 with embedded SCSI interface to Q-bus

The KZQSA adapter provides a link between all Q-bus MicroVAX systems and

the TLZ04 tape drive, and the RRD40 CDROM. Used with the TLZ04, it provides fast, highly reliable, unattended back-up and archiving capabilities for VAX 4000, MicroVAX 3000 series and MicroVAX II systems.

KFQSA Storage Adapter

Brings the power of DSSI to Q-bus systems

The KFQSA storage adapter is a single, quad-height module that provides a space-saving, low-power link between the Q-bus and the DSSI (Digital Storage Systems Interconnect) bus.

Its design permits multiple adapters to be installed in a single Q-bus resulting in the potential for greater storage capacity. A standalone MicroVAX 3400 or MicroVAX 3800, for example, with two KFQSAs can be configured with 12 RF72 ISEs to provide 12 Gb of local storage.

For information on dual-host MicroVAX configurations using the KFQSA, see the "DSSI Office Cluster" on page 131.

KDA50

Greater functionality and flexibility for your MicroVAX

The KDA50-SG is an SDI (Standard Disk Interconnect) disk adapter for the Q-bus. It offers BA213 Q-bus MicroVAX users the advantage of expanding the system storage capacity up to 12 Gb.

Up to four RA series disk drives or four ESE 20 solid state disks can be connected to a KDA50 and up to two KDA50s can be supported in each system.

A second KDA50 can be added to an existing KDA50, in any BA213 based MicroVAX system, or in combination with a KFQSA Q-bus to DSSI bus adapter to configure both SDI and DSSI disks on the same system.

Each KDA50 option requires three Q-bus slots, two for the modules and one for cable management.

RQDX3

Controller for RD and RX33 disk drives

The RQDX3 controller is required when using RD series or RX33 disk drives on Q-bus systems. Supporting up to four devices, this dual-height module uses less power than previous controllers.

Part No.		Description	Price £
KDM70-AA	i	XMI Disk/Tape Controller, 8 Ports	17890.00
CK-KDM00-LF	i	I/O Panel, 3' Cable (for VAX 6000)	1020.00
KZQSA-SF	i	TLZ04/RRD40 Adapter for BA2XX/BA4XX Enclosures	1590.00
KFQSA-SG	i	Q-bus to DSSI Adapter for BA2XX/BA4XX Enclosures	2703.00
KDA50-SG	i	SDI Controller for BA213/BA4XX Enclosures	5525.00
RQDX3-BA	i	RD/RX Controller and Cables for BA123	1856.00

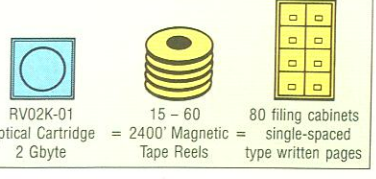
RV20 Optical Disk Drive

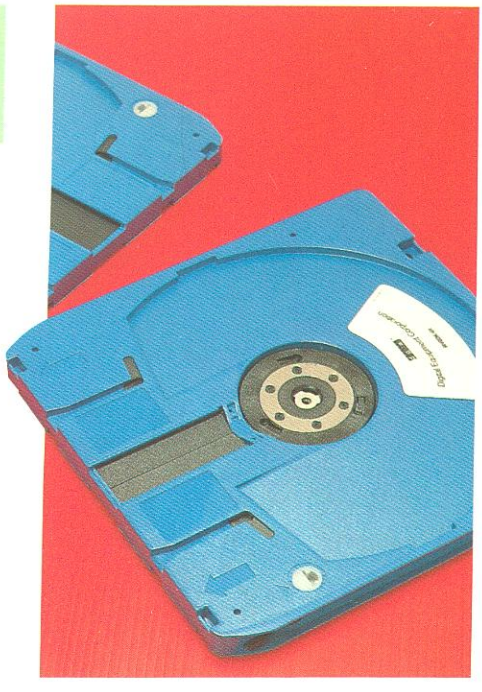
2 Gbs of compact, quickly accessible, incorruptible storage

The RV20, which is DSA compliant, is the first Digital product based on WORM (Write-Once-Read-Many) optical technology. It is a fully integrated laser drive storage subsystem for VAX system archiving and retrieval applications.

Taking advantage of the inherent characteristics of write-once media, exceptionally high density, data permanence and long media life -- the RV20 represents a highly cost effective method of archiving large quantities of data and/or large numbers of image files on compact, optical cartridges.

More data storage, less data space.





RV64 Optical Jukebox System

Fast access to enormous data and image libraries

The RV64 write-once optical jukebox system is perfect for long-term storage and fast automated retrieval. Each jukebox holds up to 128 Gb of information and can be multiple configured for even larger applications. Its Jukebox Control Software (JCS) controls the robot and provides a platform for developing applications.

The RV64 is only available through your local sales office.

For more information or brochure Ring for Details.

Part No.		Description	Price £
RBV20-PD	i D	Master Drive with VAXBI KLESI, H9643-BC Cabinet and Cabling	28310.00
RSV20-PD	i D	Master Drive with BA2XX MicroVAX KLESI, H9643-BC Cabinet and Cabling	26430.00
RV20-B	i D	Slave Drive with Cabling	18880.00
RV02K-01		2 Gbyte Media Cartridge for RV20 or RV64 Drive	302.00
E0-RV02K-1D		**Bulk Pack** 10 × RV02K-01 – **save 12%**	2643.00

Tape drives

Magnetic tape storage for safe, reliable back-up

TA90 Cartridge Tape Subsystems

Mainframe-class tape back-up – now with higher capacity

The TA90E is the new, higher capacity version of the TA90 tape drive, Digital's highest performance tape storage device for both mainframe-class and VAXcluster systems. It incorporates Improved Data Recording Capability (IDRC), a feature which allows an effective increase in cartridge capacity of two to five times, depending on the type of data being recorded.

Like the TA90, the TA90E is a dual-drive, streaming tape subsystem with optional cartridge loaders. These loaders each hold six ½" tape cartridges to provide an unattended back-up capacity of from 5 to 12 Gbs per dual-drive subsystem, compared with 2.4 Gbs on the TA90. The TA90E uses the same cartridges as the TA90.

The TA90E and TA90 tape drives are read/write compatible with IBM 3480/3490 subsystems – a major benefit to users who require industry-standard data interchange. However, tapes written in compacted mode can only be read on the TA90 and IBM 3480/3490 devices with IDRC. Existing TA90 master drives can be upgraded to the TA90E with a field-installable upgrade kit, the TA90E-UG. Once installed, all attached TU90 slave drives can take advantage of IDRC too. Up to three TU90s can be attached to a TA90 or TA90E master drive to provide even greater unattended back-up capacity.

In addition to its outstanding capacity, the TA90E drive provides the highest possible throughput of any tape subsystem available on Digital's computers. It is particularly well-suited to meet the requirements of large VAX 6000, VAX 9000 and VAXcluster installations.

This improvement in large-system tape drive capacity is consistent with Digital's strategy to provide unattended back-up for its systems with technologies, that support outstanding reliability and, enable users to restore critical data with confidence.

Note: the TA90E is supported in VMS V5.3-2 and ULTRIX V4.0. HSC code V5.0A is required for HSC40 and HSC70 controllers, HSC50s require HSC code V4.0.

TU81-PLUS

The price/performance leader for mid range systems

The TU81-PLUS magnetic tape subsystem includes a TU81 dual-density tape drive with built-in, selectable cache buffer. This cache buffer dramatically improves performance in back-up applications. For applications other than back-up, the TU81-PLUS allows you to turn off the cache buffer to ensure data integrity. It is exceptionally quiet and compact, making it well suited to today's open plan office environments.

TSV05

Ideal for data interchange

The TSV05 offers the installed base of ½" magnetic tape users, a device that is ideally suited to industry-standard interchange applications. The compact, horizontal TSV05 tape transport is less than 9" high and can be conveniently mounted in any 19" wide Digital cabinet or custom mounted into your own system configuration. Besides its small size, the TSV05 is also very easy to use and maintain. Its unique front loading and self-threading capabilities make tape handling little more than loading a floppy disk.

TSZ05

Industry standard data interchange for SCSI workstation users

The TSZ05 is the latest member of the TS05 family of autoloading, reel to reel streaming tape drives using ½", nine track, 1600 bpi, magnetic tape.

These drives provide industry-standard data interchange capabilities for a wide range of Digital platforms. The introduction of the TSZ05 now extends that capability to systems with the SCSI interface including the MicroVAX, VAXstation, DECstation 2100, DECsystem and DECstation 3100, DECstation 5000 and DECsystem 5000 series systems.

The latest electronic advancements have been incorporated into this new product, to give the highest level of reliability together with enhanced error correction/detection but at a lower cost.

The TSZ05 is self-loading and accessible from the front for ease of operation and, with its desktop enclosure, is ideally suited to an office environment.

The TSZ05 is compatible with SCSI computers running the following minimum operating systems: VMS V5.3, ULTRIX V4.0. A country kit is required for each TSZ05.

TLZ04

Fast, reliable, unattended back-up

The TLZ04 is a 4 mm DAT (Digital Audio Tape) tape drive with a SCSI interface that can record up to 1.2 Gb per cartridge, using helical scan recording techniques. It has a standard 5½" full height form factor and is available in either a table top enclosure or as an embedded drive. The drive's raw transfer rate is 180 Kb/sec; user transfer rate is 170 Kb/sec.

With this level of performance and capacity plus its low cost, the TLZ04 is the ideal solution for fast, reliable unattended back-up across a wide variety of systems. It also offers data interchange with non-Digital systems through its DDS (Digital Data Storage) format.

The TLZ04 is designed as a high capacity back-up device only. If you

require lower capacity back-up, software distribution and data interchange with other Digital systems, the TZ30, TK50 and TK70 will continue to satisfy your needs.

TZK10

New

Industry-standard QIC

The TZK10 is a 320/525 Mb Quarter Inch Cartridge (QIC) tape drive with a 5½" half-height form factor and a SCSI interface. An industry-standard recording format allows data interchange on a wide range of ULTRIX and UNIX systems. It has a read/write compatibility with 525 Mb, 320 Mb, 150 Mb and 120 Mb tapes; read only with 60 Mb tapes.

The TZK10 is the ideal tape drive for unattended back-up for small systems. It is available as an internal drive for the DECsystem 5100 or as an external device in an SZ12 expansion box.

TZ30

Compatible with a wide range of Digital systems

The TZ30 is a half height, streaming cartridge tape drive with an embedded SCSI controller. With a capacity of 95 Mb, the TZ30 is ideal for VAXstation 3100 users wanting both effective back-up of RZ series disk drives and software distribution.

The TZ30 is read/write compatible with TK50 cartridges. Also, cartridges written by a TZ30, can be read on a TK70 allowing software interchange throughout a wide range of Digital systems.

An SZ12 expansion box with a TZ30 is available if an external device is required.

TK50

Ideal for software distribution

The TK50 is available with UNIBUS, Q-bus and SCSI controllers. It has a 95 Mb capacity, and cartridges written on a TK50 drive can also be read on a TK70 drive, making it ideal for software distribution on both TK50 and TK70 based systems.

TK70

The easy to use cartridge tape drive

The TK70 is the second member of Digital's TK family of low end cartridge tape drives and is a major advance in capacity, performance, reliability and ease of use.

Designed to be used on a wide range of systems, its 296 Mb capacity will satisfy needs for disk back-up, software distribution, data collection and data interchange.

Going from a TA79 to a TA90?
Please ☎ and ask for Trade-in details.

Tape Drive Supplies

Further information can be found on the following pages.

Data Cartridges	**Page 120**
Data Cartridge Storage	**Page 121**
Magnetic Tape Media	**Pages 118/121**
Cleaning Kits	**Page 117**
Money Saving Bulk Packs	**Page 119**

Part No.		*Description*	*Price £*
TU81E-BB	I D	TU81-Plus 6250/1600 bpi Streaming Tape, BI Controller, Cabinet	23290.00
TU81E-SG	I D	TU81-Plus 6250/1600 bpi Streaming Tape, Q-bus Controller for BA2XX/BA4XX	21700.00
TA90-BB	I D	Dual Drive Master with Loaders, Formatter and Controller	91950.00
TA90E-BB	I D	Dual Drive Master with Loaders, Formatter and Controller with IDRC	101400.00
TA90E-UG	I D	Upgrade Kit TA90 to TA90E	9438.00
TU90-BB	I D	Dual Drive Slave with Cabinet, Loaders for use with TA90/TA90E	35680.00
E0-TA90K-30		½", 200 Mb Cartridge for TA90, box of 30	188.80
E0-TA90K-1C		**Bulk Pack** (180) 6 × E0-TA90K-30 – **save 10%**	1019.00
E0-TA90K-1D		**Bulk Pack** (360) 12 × E0-TA90K-30 – **save 20%**	1812.00
E0-TA90K-1L		**Bulk Pack** (720) 24 × E0-TA90K-30 – **save 35%**	2945.00
TSV05-SF	I D	TS05 Magtape, Q-bus Controller, 40" Cabinet, Side Panels, Cable Kit for BA2XX/BA4XX	10180.00
TSZ05-AB	I D	SCSI Magtape System, Desktop	5728.00
TSZ05-KE	I	TSZ05 Country Kit	273.00
TLZ04-LA	I	1.2 Gb Tape for MicroVAX 3100	4571.00
TLZ04-LB	I	1.2 Gb Tape for VAXstation 3100	4571.00
TLZ04-MA	I	1.2 Gb Tape for VAXstation 3100 Model 30, 40	4571.00
TLZ04-MB	I	1.2 Gb Tape for VAXstation 3100 Model 38, 48	4571.00
TLZ04-FA	C	1.2 Gb Tape for DECstation 2100/3100/5000, DECsystem 5100, MicroVAX 3100e	4373.00
TLZ04-GA*	C	1.2 Gb Tape for Q-bus MicroVAX 3000, MicroVAX II, VAX 4000, DECsystem 5500	4373.00
TLZ04-JF*	I	1.2 Gb (Internal) Tape for VAX 4000, BA4XX Enclosures, DECsystem 5500	3896.00
TZK10-FG	I	320/525 Mb QIC Tape Drive (Embedded) for DECsystem 5100	1431.00
TZK10-UK	C	320/525 Mb QIC Tape Drive Upgrade for SZ12 Expansion Box	1431.00
SZ12X-EB	C	TZK10 320/525 Mb QIC Tape Drive in SZ12 Expansion Box	1829.00
TZ30-EF	I	95 Mb Cartridge Tape Drive for VAXstation 3100 (Model 30/40/48) and MicroVAX 3100	1431.00
TZ30-EH	D	95 Mb Cartridge Tape Drive for VAXstation 3100 (Model 38)	1431.00
TZ30-UK	C	95 Mb Tape Drive Upgrade for SZ12 Expansion Box	1431.00
SZ12X-HB	C	TZ30 95 Mb Tape Drive in SZ12 Expansion Box	1829.00
TK50-AA	I	TK50 Drive for BA23/BA123	2226.00
TQK50-AA	I	TK50 Q-bus Controller for BA23	874.50
TK50Z-G3	C	TK50, Controller, Expansion Box	2783.00
TK70-AA	I	TK70 Drive for BA23/BA123	3657.00
TK70E-AF	I	296 Mb Tape Drive for BA4XX Enclosure	3657.00
TK70E-SF	I	TK70 Tape Drive for BA2XX	3657.00
TQK70-AA	I	TK70 Q-bus Controller for BA23	1113.00
TQK70-BA	I	TK70 Q-bus Controller for BA123	1113.00
TQK70-SF	I	TK70 Q-bus Controller for BA2XX/BA4XX	1113.00
E0-TK50-K		Data Cartridge for TK50	21.90
E0-TK52-K		Data Cartridge for TK70	34.00

*Requires KZQSA when connecting to the Q-bus

Storage Library Systems

A better way to manage your media storage and retrieval

VAX Storage Library System (SLS) is a powerful data management system that can improve the management of your storage and retrieval. SLS also gives you improved data security.

The VAX SLS software monitors and manages your entire collection of removable media as well as the storage and retrieval of all data files on that media. The SLS will also operate with optical disks, and works with all VAX systems running VMS, from VAXstations to VAXcluster systems.

As your off-line storage grows, greater demands will be made on your methods of data management. The SLS is a highly effective way of achieving better system management. In addition, the automated back-up function supports your operations staff by simplifying all VMS BACKUP functions, locating media for file creations and restoration, ensuring media security, and simplifying user interaction with the system.

SLS improves security too

The Storage Library System blocks access or viewing of data files to unauthorised users; making your data more secure. The system is designed to preserve volume integrity; it will also prevent accidental overwrites by automatically verifying all labels and protection labels and informs the operator of any inconsistencies.

- SLS works with reel-to-reel, cartridge tape and optical disks
- File and media cataloguing means faster access
- SLS controls archiving and system-level VMS backup
- Menu-driven: easy to learn, easy to use
- Flexibility to meet your demands
- For any VAX system running VMS V4.6 or higher
- Compatible with Digital's entire range of storage products including the RV20/RV64 optical drives and the TA90 tape subsystem

For more information please call

Guide to installation symbols

- i — *Free installation by Digital*
- C — *Designed to be installed by customers*
- O — *Designed to be installed by customers Free assistance given if required*

Memory

Digital has invested more resources to test memory quality than any other manufacturer

Digital performs extensive reliability, mechanical, and environmental product testing to ensure the dependability of their products even under extreme conditions.

The same standard of excellence that went into your system also applies to Digital memory products. All our products are built to be second to none in quality, performance, and reliability across a full range of system applications.

The time has never been better to buy quality memories from Digital. Increased product reliability and higher-density memory arrays have allowed us to respond to your needs.

Memory Modules

High density memory modules for the DECsystem 5100

Digital's MS44 memory options enhance and extend the power of the DECsystem 5100. Two compatible options, the MS44-BA (8 Mb) and the MS44-DA (32 Mb), allow you to configure system memory to match your application requirements.

The MS44-BA consists of two 4 Mb memory arrays and the MS44-DA comprises two 16 Mb arrays; both can be configured the same system. They connect to the CPU via eight industry-standard Single In-line Memory Module (SIMM) connectors, two connections per option.

The MS44-DA is one of the first Digital memory products to use 4 Mbit DRAMs. This advanced technology allows 32 Mb of memory in a very small package. The high density of the MS44 options and the compact system design make the DECsystem 5100 a leader in providing large memory capacity (up to 128 Mb) in a small but powerful desktop system.

Double the memory of your VAXstation 2000 or MicroVAX 2000

The MS400-CA 12 Mb memory module expands the main memory of the VAXstation 2000 and MicroVAX 2000 to 14 Mb; more than twice the systems previous memory capacity. The increased capacity is particularly beneficial for memory intensive applications, like DECwindows and CAD/CAM.

Take your VAXstation 3100 or MicroVAX 3100 up to 32 Mb

The new VAXstation 3100 Model 76 takes a new memory option – the MS44-AA. This 4 Mb parity memory module allows you to incrementally increase the system memory capacity, using the eight dedicated slots in the system box, up to the 32 Mb maximum. No memory is incorporated on the CPU board.

All other VAXstation 3100s and MicroVAX 3100 systems use MS42 modules. These systems have 4 Mb of memory on the CPU board and only one slot for additional memory. This slot, however, allows two, MS42 modules to be coupled together to obtain 16 Mb, 20 Mb, 24 Mb and 32 Mb system configurations.

The MS42-CA (16 Mb) and MS42-KA (8 Mb) modules have the necessary connectors that allow a second board, either the MS42-AB (4 Mb) or MS42-BA (12 Mb), to be attached. This feature gives you almost unlimited flexibility to configure a system that best suits your current, and future, needs.

Note: the MS42-KA and MS42-CA cannot be coupled together.

Up to 128 Mb for the DECsystem 5500

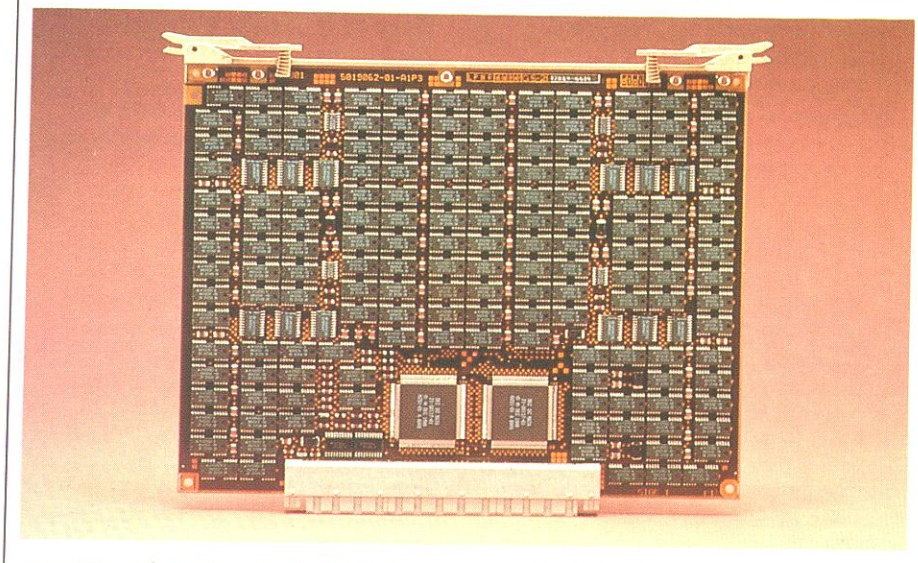
The MS220-AA is a 32 Mb memory option for Digital's new DECsystem 5500. This powerful, multi-user, ULTRIX based system has four memory slots which allow memory expansion up to 128 Mb – twice the capacity of the DECsystem 5400.

The MS220-AA offers 32 Mb of memory (using high speed 1 M-bit DRAMs), ECC reliability, high data transfer rates, and a self-configuration capability. Its dual 32 bit data paths speed up data access by the CPU and thus contribute to the DECsystem 5500's high memory bandwidth and excellent performance.

Configuring the right amount of memory maximises system performance. For single-stream, compute-intensive applications, 32 Mb or 64 Mb of memory is recommended, whilst for systems supporting a large number of users, 64 Mb or more will enhance overall performance. Large database applications can also benefit from additional memory, up to 128 Mb, to achieve maximum system performance.

VAX 8000 memory upgrades

High memory capacity from minimum board space is achieved by Digital surface mounting the one megabit DRAMs (Dynamic Random Access Memory) on both sides of the board. With more



memory on fewer boards, valuable back-plane slots are freed for other applications. Digital's one megabit DRAM memory add-ons, available for VAX 8600/8650 and 8530/8550/8700/8800 systems, provide significantly higher performance than 256K DRAM technology.

The announcement of the single board 64 Mb MS86-DA array for the VAX 8600/8650 systems makes it possible to offer users twice the system memory capacity than previously available.

This high memory capacity is particularly important to customers with memory intensive applications like CAD/CAM and information systems.

Users of the VAX 8200, 8250, 8300 and 8350 can achieve optimum system performance with the single board 16 Mb MS820-CA module, while VAX 8530, 8550, 8700, 8800 users can make the most of their VAX systems with the 64 Mb MS88-DA single board memory array.

Maximise your current system and protect your investment as all these memories are compatible with your existing memory.

High capacity memory module for VAX 4000 systems

The MS670-BA is a 32 Mb ECC Memory Array designed specifically for VAX 4000 systems. Up to four of these memory options can plug directly into the system's private bus to provide a maximum capacity of 128 Mb – twice that of the MicroVAX 3800 or 3900. This larger capacity allows more user applications to reside in the system memory, which increases performance, and supports more users.

The MS670-BA options also provide a high memory bandwidth, up to 40 Mb/s; this allows you to take full advantage of the power of the VAX 4000 system. Reliability is increased by the use of VLSI chips which reduce the number of parts and the possible points of failure.

High data integrity is assured by use of an ECC (Error Correction Code) and, by plugging directly into the system's private memory bus; this interface increases both signal integrity and quality.

Faster performance from your MicroVAX II

The MicroVAX II can run at full speed unaffected by simultaneous Q-bus DMA I/O transfers to the private memory space. Interfacing to the high-speed memory data-path bus, all MS630 memory is tightly coupled to the MicroVAX II micro-processor. This provides you with a 400 nanosecond cycle time when accessing memory locations anywhere in the physical memory space.

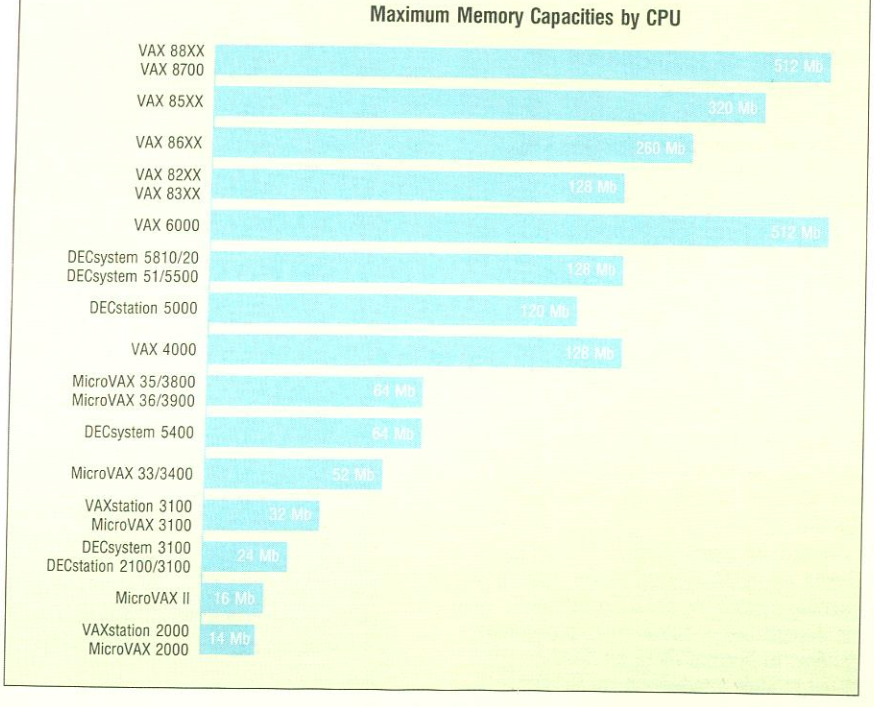
Note: The 1 Mb of memory on the CPU board is disabled if two 8 Mb memory boards are in the system.

Increased capacity for Q-bus MicroVAX 3000

The MS650-BF 16 Mb memory arrays for the Q-bus MicroVAX 3000 series extend the capacities of the MicroVAX 3500/3600/3800/3900 up to 64 Mb and the MicroVAX 3300/3400 up to 52 Mb. The 16 Mb option (MS650-BF), is based on 1 Mbit surface mount DRAM technology and doubles the previously available memory.

Multiple users of standard applications will run CAD/CAM, simulations and other memory intensive applications more efficiently when the system has sufficient memory. Both the 8 Mb and 16 Mb modules are protected by a 32 bit ECC (Error Correction Code) that detects and automatically corrects single-bit errors and detects and flags double-bit errors. This improves data integrity and saves valuable time and effort.

Memory Expansion Guide



Give your DECstation 2100/3100 more memory

The number of software applications available for these RISC-based workstations continues to grow. They make everyday computing tasks easier and more productive as well as expanding the capabilites of your system. To take full advantage of these exciting developments, you may need to increase the main memory of your current system.

The MS01-AA 4 Mb memory array will allow you to incrementally expand the capacity of your DECstation 2100/3100 up to the 24 Mb maximum. This array comprises two 2 Mb single in-line memory modules, and utilises 1 Mbit DRAMs, and the latest double-sided surface mount technology.

Memory expansion for the high-performance DECstation 5000

The DECstation 5000 model 200 is Digital's highest-performance, RISC-based workstation for compute-intensive 2D and 3D graphics applications. As the number of these user applications grow so will the need for additional memory. The MS02-AA 8Mb ECC memory modules, each occupying one slot in the system's 15-slot memory array, allow incremental expansion up to 120 Mb to meet your current and future needs.

High data integrity is assured as the MS02-AA is protected by an ECC (Error Correction Code). This feature, which was not incorporated in previous DECstation memory, allows all single-bit errors to be corrected and all double-bit errors to be detected.

New levels of performance for VAX 6000 systems

Digital's new MS65A memory options incorporate advanced technologies that optimise the overall performance of VAX 6000 systems.

There are three options to choose from; the 32 Mb MS65A-BA, the 64 Mb MS65A-CA, and the 128 Mb MS65A-DA. The 64 Mb and 128 Mb options use 4 Mbit DRAMs to provide high-density memory modules which can free up system slots and support main memory capacities up to 512 Mb – twice the previous maximum. CAD, scientific, and transaction-processing applications, in particular, benefit from this faster, higher capacity memory.

Write-back cache support is a unique feature on the VAX 6000 Model 500 memory system; by reducing traffic on the system bus, it allows multi-processor systems to operate more efficiently. Mixed-module interleaving capabilities improve performance too, especially in vector processors.

Built-in self test, ECC error detection and correction, and enhanced error logging capabilities ensure data integrity and high system availability.

Only MS65A memories can be configured on a VAX 6000 Model 500 systems. If you upgrade your current VAX 6000 to a Model 500 system, you must replace all existing MS62A memories. You will receive a trade-in allowance for these options, which must be returned to Digital, when you purchase an equivalent or greater capacity of MS65A memory. If you wish to replace existing MS62A options with higher-density MS65A memory to free up system slots, you can also take advantage of a trade-in programme.

In VAX 6000 Model 200, 300 and 400 systems, the new MS65A options and existing MS62A modules can be mixed. Two ROMs, installed on each system CPU, allow you to benefit fully from the performance advantages of interleaving and ensure data integrity.

Does your system need more Digital memory?

Insufficient system memory can reduce system performance and even keep you from running some application packages. The optimum amount of memory will depend on your specific application. Artificial intelligence, for instance, will use more memory to maintain performance, while process control applications require less.

Compare the maximum expansion capacity shown in the chart to your system's present capacity. The Memory Expansion Capacities Chart shows the maximum memory capacities for Digital processors. You will probably find that your system's maximum memory capability has grown with recent advances in technology.

Upgrading towards the maximum for your system may be easier than you think. Digital's commitment to Digital Storage Architecture may allow you to install more memory without requiring any changes to your system other than the installation of extra memory boards.

Part No.			Description	Price £
MS01-AA	ⓘ		4 Mb Memory (2 × 2 Mb SIMMs) for DECstation 2100/3100	795.00
MS02-AA	ⓘ		8 Mb Memory for DECstation 5000 Model 200	3498.00
MS42-AB	ⓘ		4 Mb Memory for MicroVAX 3100/VAXstation 3100 Models 30, 38, 40, 48	795.00
MS42-BA	ⓘ		12 Mb Memory for MicroVAX 3100/VAXstation 3100 Models 30, 38, 40, 48	2385.00
MS42-CA	ⓘ		16 Mb Memory for MicroVAX 3100/VAXstation 3100 Models 30, 38, 40, 48	3180.00
MS42-KA	ⓘ	NEW	8 Mb Memory for MicroVAX 3100/VAXstation 3100 Models 31, 38, 40, 48	1590.00
MS44-AA	ⓘ	NEW	4 Mb Memory for VAXstation 3100 Model 76	1113.00
MS44-BA	ⓘ	NEW	8 Mb Memory (2 × 4 Mb SIMMs) for DECsystem 5100	2226.00
MS44-DA	ⓘ	NEW	32 Mb Memory (2 × 16 Mb SIMMs) for DECsystem 5100	12720.00
MS62A-AB	ⓘ		32 Mb Memory for DECsystem 5800, VAX 6000 Models 200, 300, 400	25440.00
MS65A-BA*	ⓘ	NEW	32 Mb Memory for VAX 6000 Models 200, 300, 400, 500	26240.00
MS65A-CA*	ⓘ	NEW	64 Mb Memory for VAX 6000 Models 200, 300, 400, 500	50880.00
MS65A-DA*	ⓘ	NEW	128 Mb Memory for VAX 6000 Models 200, 300, 400, 500	87450.00
MS86-DA	ⓘ		64 Mb Memory for VAX 8600/8650	38160.00
MS88-CA	ⓘ		16 Mb Memory for VAX 8530/8550/8700/8800	9540.00
MS88-DA	ⓘ		64 Mb Memory for VAX 8530/8550/8700/8800	38160.00
MS220-AA	ⓘ	NEW	32 Mb Memory for DECsystem 5500	19080.00
MS400-CA	ⓘ		12 Mb Memory for VAXstation 2000	4770.00
MS630-BB	ⓘ		4 Mb Memory for MicroVAX II	2184.00
MS630-CA	ⓘ		8 Mb Memory for MicroVAX II	5460.00
MS650-AF	ⓘ		8 Mb Memory for Q-bus MicroVAX 3000	4770.00
MS650-BF	ⓘ		16 Mb Memory for Q-bus MicroVAX 3000	9540.00
MS670-BA	ⓘ	NEW	32 Mb Memory for VAX 4000 Model 300	19080.00
MS820-CA	ⓘ		16 Mb Memory for VAX 8200/8250/8300/8350	11130.00

* VMS V5.4 is required

Part Number Index

Part No.		Page No.s	Prices £	Discounts EU	OEM
12-19816-01		55	15.20	3	U
12-19817-01		55	8.30	3	U
12-24664-02		42	24.20	3	U
22-00007		116	3.20	3	U
B					
B400X-B9	I	31, 33	7225.00	3	X
BC16U-10		57	10.40	3	U
BC18P-10		18	20.70	3	U
BC19B-02		53	31.10	3	U
BC19E-02		53	31.10	3	U
BC19F-02		53	41.40	3	U
BC19L-25		53	134.50	3	U
BC19S-10		18	51.70	3	U
BC19Y-10		53	86.30	3	U
BC21M-09		29, 31	103.50	3	U
BC55D-25		53	82.80	3	U
BN01A-02		18	72.80	3	U
BN12A-2E		92	8.50	3	X
BN18B-4E		81	10.40	3	U
BN19B-2E	I	29, 33	7.60	3	U
BN22E-2E	I	31, 33	6.90	3	U
BN24F-03		57	5.50	3	U
BN24F-04		57	6.90	3	U
BN24G-01		57	4.10	3	U
BN24G-03		57	5.50	3	U
BN24G-04		57	6.90	3	U
BN24G-07		57	17.30	3	U
BN24H-03		57	5.50	3	U
BN24H-04		57	6.90	3	U
BN24J-03		57	5.50	3	U
BN24K-03		57	48.30	3	U
BN24L-03		57	62.10	3	U
BN24M-03		57	62.10	3	U
BN24N-03		57	62.10	3	U
BNE4G-02		51	58.00	3	U
BS10C-01		54	103.50	3	U
BS10D-03		54	138.00	3	U
BS16Q-03		54	103.50	3	U
BS16R-02		54	103.50	3	U
C					
CK-DELQA-YA	I	48	136.50	3	X
CK-DELQA-YB	I	48	136.50	3	X
CK-DELQA-YF	I	48	136.50	3	X
CK-DELUA-K1	I	48	204.80	3	U
CK-DELUA-KM	I	48	204.80	3	U
CK-DHQ11-AA	I	52	273.00	3	U
CK-DHQ11-AB	I	52	273.00	3	U
CK-DHQ11-AF	I	52	273.00	3	U
CK-DHQ11-WA	I	52	364.00	3	U
CK-DHQ11-WB	I	52	364.00	3	U
CK-DHQ11-WF	I	52	364.00	3	U
CK-DM308-A7	I	37	2720.00	3	U
CK-DM316-W7	I	37	4760.00	3	U
CK-DMB32-LJ	I	52	955.50	3	3
CK-DMB32-LM	I	52	955.50	3	6
CK-DMB32-LN	I	52	955.50	3	3
CK-DSV11-UA	I	42	425.00	3	U
CK-DSV11-UB	I	42	425.00	3	U
CK-DSV11-UF	I	42	425.00	3	U
CK-KDM00-LF	I	133	1020.00	3	3
CK-SA70-AA	I	129	3640.00	3	U
CXA16-AF	I	29,31,33,36	2057.00	3	X
CXY08-AF	I	29,31,33,36	1423.00	3	X
D					
DE100-AA	C	12, 51	222.70	3	X
DE100-PA	C	51	351.10	3	X
DE200-AA	C	51	298.20	3	X
DE200-PA	C	51	422.80	3	X
DE201-AA	C	51	298.20	3	X
DE201-PA	C	51	422.80	3	X
DE210-AA	C	51	373.70	3	X
DE210-PA	C	51	494.50	3	X
DEBAM-AB	I	39	6417.00	3	X
DEBAM-RD	I	39	7713.00	3	X
DEBAM-RG	I	39	10570.00	3	X
DEBET-AD	D	39	4908.00	3	X
DEBET-AK	I	39	943.80	3	U
DEBET-RK	I	39	943.80	3	U
DEBET-RQ	D	39	5663.00	3	X
DEFCN-AB	C	47	2265.00	3	X
DEFCN-BB	C	47	2265.00	3	X
DEFCN-MF	C	47	2265.00	3	X
DEFCN-NF	C	47	3398.00	3	X
DEFEB-AB	C	47	18880.00	3	X
DEFZA-AA	C	48	4770.00	3	X
DELNI-BB	D	38	1153.00	3	U
DELNK-AE	D	38	11.30	3	U
DELQA-YM	I	48	2227.00	3	U
DELUA-M	I	48	3851.00	3	U
DEMPR-AB	D	41	2039.00	3	U
DEMSA-DE	I	44	9513.00	3	U
DEMSA-PE	I	44	13080.00	3	U
DEMSA-SE	I	44	15860.00	3	U
DEMSA-XE	I	44	13080.00	3	U
DEMSB-DE	I	45	3964.00	3	U
DEMSB-SE	I	45	7928.00	3	U
DEMSB-XE	I	45	4757.00	3	U
DEREN-AB	C	40	1114.00	3	U
DEREN-RD	C	40	2076.00	3	U
DEREN-RQ	C	40	2076.00	3	U
DESPR-EF	D	41	705.90	3	U
DESTA-BA	D	41	188.80	3	U
DETPR-AB	D	41	1661.00	3	X
DETPR-BB	D	41	1661.00	3	X
DETPR-DE	C	41	15.10	3	U
DHQ11-M	I	52	1148.00	3	U
DHT80-AA	I	32	792.80	3	X
DJ-31EP2-A9	C	50	9438.00	3	X
DJ-31ER2-A9	C	50	11480.00	3	X
DJ-31ER4-A3	C	50	11780.00	3	X
DL-DSRVF-BB	D	35	2581.00	3	X
DL-LA210-AE	C	90	1189.00	U	X
DL-LA324-AE	C	89	1427.00	U	X
DL-LA70-AE	C	85	337.90	U	X
DL-LA75-AE	C	87	592.30	U	X
DL-LG01-DA	I D	92	7608.00	U	X
DL-LG02-DA	I D	92	10290.00	U	X
DL-LG31-A3	I D	91	5653.00	U	X
DL-LJ250-AE	I	83	1112.00	U	X
DL-LJ252-AE	I	83	1112.00	U	X
DL-LN03R-AE	C	79	3771.00	U	X
DL-LN05-AE	C	78	1777.00	U	X
DL-LN06-AE	C	78	2639.00	U	X
DL-LP29-S3	I D	93	23160.00	3	U
DL-LP29-V3	I D	93	23160.00	3	U
DL-LP37-S3	I D	93	11860.00	3	U
DL-LP37-V3	I D	93	11860.00	3	U
DL-LPS20-AE	I	81	18620.00	3	U
DL-LPS40-D3	I	81	32220.00	3	U
DL-LPS40-F3	I	81	32220.00	3	U
DL-VT330-GE	C	69	1204.00	U	X
DL-VT330-HE	C	69	1204.00	U	X
DL-VT330-JE	C	69	1204.00	U	X
DL-VT330-KE	C	69	1204.00	U	X
DL-VT330-LE	C	69	1204.00	U	X
DL-VT330-ME	C	69	1204.00	U	X
DL-VT340-GE	C	69	1884.00	U	X
DL-VT340-KE	C	69	1884.00	U	X
DL-VT420-AE	C	67	425.00	U	X
DL-VT420-BE	C	67	425.00	U	X
DL-VT420-CE	C	67	425.00	U	X
DL-VT420-DE	C	67	425.00	U	X
DL-VT420-EE	C	67	425.00	U	X
DL-VT420-FE	C	67	425.00	U	X
DL-VX100-GE	C	71	2143.00	U	X
DL-VX100-HE	C	71	2699.00	U	X
DL-VX100-IE	C	71	2143.00	U	X
DL-VX100-JE	C	71	2699.00	U	X
DM300-KE		37	9.10	3	U
DM308-AB	I	37	2718.00	3	U
DM316-AB	I	37	4757.00	3	U
DM316-BB	I	37	4606.00	3	U
DM332-BB	I	37	8909.00	3	U
DMB32-M	I	52	3968.00	3	5
DSH32-BA	I	27	1510.00	3	X
DSRVB-AB	D	35	2412.00	3	U
DSRVB-KE	D	35	11.30	3	U
DSRVB-MB	D	35	6191.00	3	U
DSRVB-MD	D	35	11700.00	3	U
DSRVF-BB	D	35	3488.00	3	X
DSRVF-KE	D	35	18.90	3	X
DSRVF-MA	D	35	6312.00	3	U
DSRVF-MB	D	35	14950.00	3	X
DSRVF-MC	D	35	28240.00	3	U
DSRVP-AB	D	40	3039.00	3	U
DSRVP-KE	D	40	9.80	3	U
DSRVR-DE	C	45	4530.00	3	U
DSRVS-CB	I	36	12090.00	3	U
DSRVS-DB	I	36	12650.00	3	U
DSRZC-AB	D	37	6795.00	3	U
DSRZC-BB	D	37	3941.00	3	U
DSV11-AA	I	42	3133.00	3	U
DSV11-AB	I	42	3020.00	3	U
DSV11-SF	I	29,42	3510.00	3	U
DSV11-SG	I	42	3398.00	3	U
DU-51MT1-A9	D	32	8496.00	3	2
DU-51MT2-A9	D	32	18700.00	3	2
DU-51MT3-A9	D	32	12150.00	3	2
DU-51MT4-A9	D	32	19290.00	3	2
DU-55HT1-A9	I	32	32390.00	3	U
DV-31DSA-A9	D	27	3473.00	3	2
DV-31DT1-A9	D	27	6040.00	3	2
DV-31DTA-A9	D	27	4832.00	3	2
DV-31ESA-A9	D	27	4606.00	3	2
DV-31ET4-A9	D	27	10720.00	3	2
DV-31ETA-A9	D	27	5965.00	3	2
DV-330S4-A3	I	29	9643.00	3	U
DV-330T4-A3	I	29	11130.00	3	U
DV-340S4-A3	I	29	15760.00	3	U
DV-340T4-A3	I	29	23230.00	3	U
DV-43JS1-A9	I	31	42440.00	3	U
DV-43JS2-A9	I	31	84460.00	3	U
DV-43JT1-A9	I	31	64350.00	3	U
DV-43JT2-A9	I	31	52400.00	3	U
E					
E0-ACAPM-01		95	181.20	3	U
E0-BC16E-10		61,87	2.80	3	U
E0-BC16E-25		61,87	4.80	3	U
E0-BC16E-50		61,87	8.30	3	U
E0-BC16K-10		57	10.40	3	U
E0-BC16M-06		55	9.00	3	U
E0-BC16M-15		55	10.40	3	U
E0-BC16M-30		55	14.50	3	U
E0-BC22D-10		61	16.60	3	U
E0-BC22D-25		61	20.70	3	U
E0-BC22D-50		61	27.60	3	U
E0-BC22E-10		61	25.50	3	U
E0-BC22E-25		61	33.80	3	U
E0-BC22E-50		61	49.70	3	U
E0-BC22F-10		53,61	33.10	3	U
E0-BC22F-25		53,61	44.20	3	U
E0-BC22F-50		53,61	65.60	3	U
E0-BC26V-12		129	182.90	3	U
E0-BC26V-1L		129	993.80	3	U
E0-BC26V-25		129	318.00	3	U
E0-BC26V-50		129	445.20	3	U
E0-BC26V-80		129	612.20	3	U
E0-BCC04-25		61	37.30	3	U
E0-BCC04-50		61	51.70	3	U
E0-BCC05-10		61	17.90	3	U
E0-BCC05-25		61	24.80	3	U
E0-BCC05-50		61	30.40	3	U
E0-BCC14-10		61	22.80	3	U
E0-BN02A-2E		41	6.90	3	U
E0-BN19A-2E		18,23,29,32, 33,50	6.90	3	U
E0-BN20E-2E	I	29,36,39, 40,47	8.30	3	U
E0-BN24B-01		57	125.60	3	U
E0-BN24B-03		57	131.10	3	U
E0-BN24B-10		57	153.90	3	U
E0-BN24B-20		57	184.90	3	U
E0-BN24B-30		57	216.70	3	U
E0-BN24B-4E		57	135.90	3	U
E0-BN24D-01		57	102.10	3	U
E0-BN24D-03		57	108.30	3	U
E0-BN24D-10		57	122.10	3	U
E0-BN24D-20		57	150.40	3	U
E0-BN24D-30		57	176.00	3	U
E0-BN24D-4E		57	112.50	3	U
E0-BN24E-01		57	89.70	3	U
E0-BN24E-03		57	93.80	3	U
E0-BN24E-10		57	110.40	3	U
E0-BN24E-20		57	134.50	3	U
E0-BN24E-30		57	158.70	3	U
E0-BN24E-4E		57	97.30	3	U
E0-BNCIA-10		125	365.70	3	U
E0-BNCIA-20		125	508.80	3	U
E0-BNCIA-45		125	914.30	3	U
E0-BNE2A-MA		53	222.20	3	U
E0-BNE2A-MB		53	610.00	3	U
E0-BNE2A-MC		53	953.60	3	U
E0-BNE2B-MA		53	113.90	3	U
E0-BNE2B-MB		53	322.20	3	U
E0-BNE2B-MC		53	448.50	3	U
E0-BNE2B-ME	D	53	1751.00	3	U
E0-BNE3H-05		53	43.50	3	U
E0-BNE3H-10		53	58.00	3	U
E0-BNE3H-20		53	79.40	3	U
E0-BNE3H-40		53	132.50	3	U
E0-BNE3K-05		53	43.50	3	U
E0-BNE3K-10		53	58.00	3	U
E0-BNE3K-20		53	79.40	3	U
E0-BNE3K-40		53	134.50	3	U
E0-BNE3L-05		53	67.60	3	U
E0-BNE3L-10		53	104.20	3	U
E0-BNE3L-20		53	175.30	3	U
E0-BNE3L-40		53	318.10	3	U
E0-BNE3M-05		53	68.30	3	U
E0-BNE3M-10		53	106.30	3	U
E0-BNE3M-20		53	177.30	3	U
E0-BNE3M-40		53	320.20	3	U
E0-BNE4C-02		53	33.80	3	U
E0-BNE4C-05		53	39.30	3	U
E0-BNE4D-02		53	35.20	3	U
E0-BNE4D-05		53	41.40	3	U
E0-BS16K-08		54	60.00	3	U
E0-BS19D-02		53	27.60	3	U
E0-CFILE-02		119	16.60	3	U
E0-DFILE-02		118	24.20	3	U
E0-DFILE-03		118	33.20	3	U
E0-DFILE-04		118	29.40	3	U
E0-H0401-A		61	123.10	3	U
E0-H3104-B		37,59	41.40	3	U
E0-H3107-A		59	89.70	3	U
E0-H3111-EB		57	31.70	3	U
E0-H3111-EC		57	31.70	3	U
E0-H3111-FB		57	41.40	3	U
E0-H3111-FC		57	41.40	3	U
E0-H3113-A		60	22.10	3	U
E0-H3113-B		59,60	22.10	3	U
E0-H3114		58	13.80	3	U
E0-H8220-00		60	22.80	3	U
E0-H8222		58	1.40	3	U
E0-H8223-00		58	8.30	3	U
E0-H8224-00		58	6.20	3	U

Part Number Index

Part No.	Page No.s	Prices £	Discounts EU	OEM
E0-H8225-00	58	5.50	3	U
E0-H8226-00	54	22.10	3	U
E0-H8240	60	112.50	3	U
E0-H8241	60	120.70	3	U
E0-H8243-A	55,57,58	138.00	3	U
E0-H8245-A	57,60	124.20	3	U
E0-H8571-D	60,87	18.60	3	U
E0-H8571-DL	60	284.30	3	U
E0-H8571-E	60,87	21.40	3	U
E0-H8572-00	60	4.80	3	U
E0-H8575-A	60,87	15.90	3	U
E0-H8575-AL	60	238.70	3	U
E0-H8575-B	60,87	17.30	3	U
E0-HFILE-01	119	9.80	3	U
E0-HFILE-02	119	11.30	3	U
E0-L120R-12	110	56.60	3	U
E0-LA10R-06	110	33.40	3	U
E0-LA10R-1D	96,110	353.00	3	U
E0-LA10R-1L	96,110	640.80	3	U
E0-LA21X-ST	90	120.80	3	U
E0-LA21X-SW	98	29.80	3	U
E0-LA24R-1D	96,110	531.50	3	U
E0-LA24R-KA	110	52.10	3	U
E0-LA24R-KC	110	67.20	3	U
E0-LA24X-AC	95	463.60	3	U
E0-LA24X-PR	89	564.00	3	U
E0-LA24X-ST	89	68.00	3	U
E0-LA36R-12	110	59.60	3	U
E0-LA50R-06	110	21.90	3	U
E0-LA50R-1D	96,110	209.90	3	U
E0-LA50R-1L	96,110	427.30	3	U
E0-LA50X-FF	98	12.80	3	U
E0-LA70R-06	110	20.70	3	U
E0-LA70R-1D	96,110	210.70	3	U
E0-LA70X-AC	95	181.20	3	U
E0-LA70X-DC	98	9.80	3	U
E0-LA70X-DP	98	49.10	3	U
E0-LA70X-PR	85	188.80	3	U
E0-LA70X-ST	85	71.70	3	U
E0-LA75X-AC	95	249.20	3	U
E0-LA75X-DS	98	40.80	3	U
E0-LA75X-PR	87	83.10	3	U
E0-LABEL-14	112,113	24.20	3	U
E0-LABEL-21	112,113	24.20	3	U
E0-LABEL-30	112,113	24.20	3	U
E0-LASER-A3	112,113	57.40	3	U
E0-LASER-A4	112,113	24.20	3	U
E0-LAXX-FD D	95	679.50	3	U
E0-LAXXS-AA	98	60.40	3	U
E0-LGR31-1L	96,111	259.20	3	U
E0-LGXXR-1L	96,111	469.80	3	U
E0-LJ25X-AD	112,113	23.90	3	U
E0-LJ25X-DC	98	9.80	3	U
E0-LJ25X-DS	98	46.80	3	U
E0-LJ25X-PR	83	169.90	3	U
E0-LJ25X-SW	98	17.80	3	U
E0-LN01X-AA	115	69.70	3	U
E0-LN03X-1D	96,114	770.10	3	U
E0-LN03X-1L	96,115	528.50	3	U
E0-LN03X-2R	108	357.00	3	U
E0-LN03X-AC	115	59.60	3	U
E0-LN03X-AK	112,113	27.80	3	U
E0-LN03X-AS	114	36.20	3	U
E0-LNXX-LP	78	603.30	3	U
E0-LNXX-PR	78,103	289.20	3	U
E0-LNXX-ST	78,103	179.40	3	U
E0-LNXX-XA	103	253.90	3	U
E0-LNXX-XB	103	938.40	3	U
E0-LNXX-XC	103	3533.00	3	U
E0-LP05R-01	110	37.40	3	U
E0-LP25R-06	111	83.50	3	U
E0-LP25X-BA	109	420.60	3	U
E0-LP25X-BB	109	420.60	3	U
E0-LP26X-BA	109	420.60	3	U
E0-LP26X-BB	109	420.60	3	U
E0-LP27R-01	110	35.80	3	U
E0-LP27X-BA	109	420.60	3	U
E0-LP27X-BB	109	420.60	3	U
E0-LP29R-01	111	48.50	3	U
E0-LP29R-02	111	31.00	3	U
E0-LP29R-03	111	83.50	3	U
E0-LP29X-AA	109	420.60	3	U
E0-LP29X-AC	109	449.70	3	U
E0-LP29X-AD	109	420.60	3	U
E0-LP29X-AE	109	420.60	3	U
E0-LP29X-AF	109	420.60	3	U
E0-LP29X-EA	109	449.70	3	U
E0-LP29X-EB	109	480.30	3	U
E0-LP29X-EC	109	420.60	3	U
E0-LP37R-01	111	196.40	3	U
E0-LP37R-02	111	196.40	3	U
E0-LP37X-AA	109	384.80	3	U
E0-LP37X-AC	109	384.80	3	U
E0-LP37X-BA	109	384.80	3	U
E0-LP37X-BC	109	384.80	3	U
E0-LP37X-BD	109	384.80	3	U
E0-LP37X-EA	109	384.80	3	U
E0-LP37X-EC	109	384.80	3	U
E0-LPS2X-LP	115	835.00	3	U
E0-LQP01-KA	111	25.40	3	U
E0-LQP02-KA	111	27.20	3	U
E0-LQP02-MB	106	39.80	3	U
E0-LQP02-MD	106	35.80	3	U
E0-LQP02-MF	106	39.80	3	U
E0-LQP02-MP	106	39.80	3	U
E0-LQP02-MR	106	39.80	3	U
E0-LQP02-MT	106	39.80	3	U
E0-LQP02-MV	106	39.80	3	U
E0-LQP20-FJ	95	538.30	3	U
E0-LQP25-1L	96,111	117.00	3	U
E0-LQP25-KA	111	12.80	3	U
E0-LQP25-KB	111	12.80	3	U
E0-LQP4X-CA	106	63.60	3	U
E0-LQP4X-CB	107	63.60	3	U
E0-LQP4X-CC	107	63.60	3	U
E0-LQP4X-CD	107	63.60	3	U
E0-LQP4X-CE	107	63.60	3	U
E0-LQP4X-CF	107	63.60	3	U
E0-LQP4X-CH	106	63.60	3	U
E0-LQP4X-CJ	106	63.60	3	U
E0-LQP4X-CK	107	63.60	3	U
E0-LQP4X-DA	106	63.60	3	U
E0-LQPX2-SW	61	151.00	3	U
E0-LVPXX-AF	112,113	16.60	3	U
E0-LVPXX-AG	112,113	32.50	3	U
E0-LVPXX-AJ	112,113	52.10	3	U
E0-LVPXX-AL	109	9.80	3	U
E0-LVPXX-AM	109	9.80	3	U
E0-LVPXX-AN	109	9.80	3	U
E0-LVPXX-AP	109	9.80	3	U
E0-LVPXX-AR	109	9.80	3	U
E0-LVPXX-AS	109	9.80	3	U
E0-LVPXX-AT	109	9.80	3	U
E0-LVPXX-AU	109	9.80	3	U
E0-LVPXX-AV	109	9.80	3	U
E0-LVPXX-AW	109	9.80	3	U
E0-LVPXX-AY	109	9.80	3	U
E0-LVPXX-AZ	109	9.80	3	U
E0-LXYXX-RB	111	63.60	3	U
E0-PAPER-A4	112,113	43.80	3	U
E0-PAPER-AW	112,113	25.70	3	U
E0-PAPER-PA	112,113	30.20	3	U
E0-PAPER-PF	112,113	22.70	3	U
E0-PAPER-PH	112,113	21.10	3	U
E0-PAPER-PR	112,113	50.60	3	U
E0-PCXXA-AA	61	169.90	3	U
E0-PCXXF-CZ	61	151.00	3	U
E0-PTRAY-03	98	28.70	3	U
E0-RV02K-1D	96,120,133	2643.00	3	U
E0-RX02K-10	118	26.40	3	U
E0-RX02K-AJ	118	188.80	3	U
E0-RX23K-10	118	24.20	3	U
E0-RX23K-1L	96,118	205.40	3	U
E0-RX33K-10	118	21.90	3	U
E0-RX33K-1L	96,118	173.70	3	U
E0-RX33K-AJ	118	166.10	3	U
E0-RX50K-10	118	19.90	3	U
E0-RX50K-1L	96,118	155.80	3	U
E0-RX50K-AJ	118	143.10	3	U
E0-STAND-01	96	124.60	3	U
E0-STAND-02	96	145.00	3	U
E0-STAND-03	97	218.20	3	U
E0-TA90K-1C	96,120,135	1019.00	3	U
E0-TA90K-1D	96,120,135	1812.00	3	U
E0-A90K-1L	96,120,135	2945.00	3	U
E0-TA90K-30	120,135	188.80	3	U
E0-TABLE-04	99	283.10	3	U
E0-TK50-K	120,135	21.90	3	U
E0-TK50K-1L	96,120	875.80	3	U
E0-TK50X-10	121	26.40	3	U
E0-TK52-K	120,135	34.00	3	U
E0-TK52K-1L	96,120	1359.00	3	U
E0-TU058-K	120	21.30	3	U
E0-TUN06-C	120	11.30	3	U
E0-TUN06-S	120	12.10	3	U
E0-TUN06-SL	96,120	107.20	3	U
E0-TUN12-C	120	15.10	3	U
E0-TUN12-S	120	15.90	3	U
E0-TUN12-SL	96,120	143.50	3	U
E0-TUN24-A	120	21.10	3	U
E0-TUN24-C	120	21.90	3	U
E0-TUN24-S	120	21.10	3	U
E0-TUN24-SA	96,120	792.80	3	U
E0-TUN24-SB	96,120	1480.00	3	U
E0-TUN24-SL	96,120	169.10	3	U
E0-TXCAB-DA	120	410.00	3	U
E0-TXCAB-DB	120	351.80	3	U
E0-TXCAB-SA	120	265.00	3	U
E0-TXCAB-SB	120	212.90	3	U
E0-VSXXX-01	101	8.30	3	U
E0-VT2XX-FA	100	34.00	3	U
E0-VT3XX-DS	101	41.50	3	U
E0-VT3XX-FA	100	37.80	3	U
E0-VT3XX-KF	116	15.10	3	U
E0-VT3XX-P2	99	132.10	3	U
E0-VT3XX-P3	99	61.90	3	U
E0-VT4XX-MA	101	117.00	3	U

F

FC310-AE	D	27,50	60.40	3	X

H

H3105-B		60	103.50	3	U
H3107-B		59	56.60	3	U
H3107-L		57	26.90	3	U
H3107-M		57	26.90	3	U
H3107-N		57	26.90	3	U
H3107-P		57	31.10	3	U
H3108-BA		57	31.10	3	U
H3108-CA		57	16.60	3	U
H3111-GA		57	62.10	3	U
H3111-GB		57	62.10	3	U
H3111-GC		57	62.10	3	U
H3112-E		57	22.10	3	U
H3112-F		57	22.10	3	U
H3117		59	44.20	3	U
H3118		59	148.40	3	U
H3126-AA		38	8.30	3	U
H3300-AA		54	1104.00	3	U
H3301-AA		54	1380.00	3	U
H3310-AA		54	270.50	3	U
H3311-AA		54	517.50	3	U
H3330-AA		54	414.00	3	U
H3331-AA		54	517.50	3	U
H3350-AA	C	42	113.30	3	X
H4005	C	42	188.80	3	U
H8100-C		57	86.30	3	U
H8100-D		57	13.80	3	U
H8100-E		57	69.00	3	U
H8242		58	276.00	3	U
H8244-A		55,57,58	655.50	3	U
H8246-A		60	282.90	3	U
H8571-C		60,69,87	13.80	3	U
HSC40-AB	I D	125	28310.00	3	3
HSC5X-DA	I	125	8305.00	3	5
HSC5X-EB	I	125	2265.00	3	U
HSC70-AB	I D	125	44920.00	3	3
HSC7X-AB	I	125	19630.00	3	3

I

IEZ11-AB	D	8	1629.00	3	U

K

KDA50-SG	I	133	5525.00	3	X
KDM70-AA	I	133	17890.00	3	5
KFQSA-SG	I	29,133	2703.00	3	X
KZQSA-SF	I	31,133	1590.00	3	X

L

LA10X-AA		103	59.60	3	U
LA10X-AB		103	59.60	3	U
LA10X-AC		103	59.60	3	U
LA10X-AE		103	59.60	3	U
LA10X-AF		103	59.60	3	U
LA10X-AP		103	59.60	3	U
LA10X-AR		103	59.60	3	U
LA10X-JP		103	59.60	3	U
LA10X-LH		90,103	99.40	U	X
LA12R-06		110	41.70	3	U
LA210-AE	C	90	1268.00	U	X
LA21X-BT	C	90	194.80	U	X
LA24X-CA		103	70.80	3	U
LA24X-CB		103	70.80	3	U
LA24X-CC		103	70.80	3	U
LA24X-CD		103	70.80	3	U
LA24X-CE		103	70.80	3	U
LA24X-CF		103	70.80	3	U
LA24X-CG		103	70.80	3	U
LA24X-CH		103	70.80	3	U
LA24X-DS		98	54.90	3	U
LA24X-SF		89	632.00	3	U
LA324-AE	C	89	1586.00	U	X
LA70-AE	C	85	357.80	U	X
LA70X-SF	C	85	182.90	U	X
LA75-AE	C	87	632.00	U	X
LA75X-AA		103	42.50	3	U
LA75X-AB		103	42.50	3	U
LA75X-SF	C	87	298.10	U	U
LAXX-NC		98	29.80	3	U
LCGX1-AE		112,113	109.70	3	U
LCGX1-JB		114	135.20	3	U
LCGX1-JC		114	135.20	3	U
LCGX1-JM		114	135.20	3	U
LCGX1-JW		114	55.30	3	U
LCGX1-JY		114	135.20	3	U
LCGX1-PE		112,113	46.80	3	U
LG01-DA	I D	92	7990.00	U	X
LG02-DA	I D	92	10840.00	U	X
LG31-A3	I D	91	6035.00	U	X
LGK31-AE		91	127.50	U	X
LGR31-01		111	50.90	3	U
LGXXR-04		111	110.50	3	U
LJ250-AE	I	83	1231.00	U	X
LJ252-AE	I	83	1231.00	U	X
LJ25X-AA		114	32.30	3	U
LJ25X-AB		114	25.50	3	U
LJ25X-AC		112,113	14.30	3	U
LJ25X-AE		112,113	52.90	3	U
LJ25X-AF		112,113	53.60	3	U

Part Number Index

Part No.		Page No.s	Prices £	Discounts EU	OEM
LK201-KC		100	58.70	3	U
LK201-KJ		100	58.70	3	U
LK201-RE	D	21,23	182.00	U	X
LK250-PA	C	11,12,13	227.50	U	X
LK4XX-KC		100	57.20	3	U
LK4XX-KD		100	33.40	3	U
LK4XX-KH		100	41.30	3	U
LK4XX-KJ		100	57.20	3	U
LKWPS-AA		101	49.30	3	U
LKWPS-AB		101	49.30	3	U
LKWPS-AC		101	49.30	3	U
LKWPS-AD		101	49.30	3	U
LN03R-AE	C	79	3951.00	U	X
LN03R-UA	I	79	2010.00	U	X
LN03X-AD		114	142.70	3	U
LN03X-CB		105	237.70	3	U
LN03X-CJ		105	237.70	3	U
LN03X-CL		104	237.70	3	U
LN03X-CM		104	237.70	3	U
LN03X-CP		104	237.70	3	U
LN03X-CR		108	198.00	3	U
LN03X-CS		104	237.70	3	U
LN03X-CW		105	237.70	3	U
LN03X-CX		105	237.70	3	U
LN03X-CY		105	237.70	3	U
LN03X-CZ		105	237.70	3	U
LN03X-DA		108	396.70	3	U
LN03X-DE		108	237.70	3	U
LN03X-IC		104	279.70	3	U
LN03X-SF	C	97	1030.00	U	X
LN05-AE	C	78	1860.00	U	X
LN06-AE	C	78	2770.00	U	X
LN06X-EF	C	78	363.10	3	U
LNXX-AC		103	82.10	3	U
LNXX-CA		103	237.70	3	U
LNXX-CB		103	237.70	3	U
LNXX-CC		103	237.70	3	U
LNXX-CD		103	237.70	3	U
LNXX-CN		103	237.70	3	U
LNXX-LA		103	67.10	3	U
LNXX-LB		103	58.70	3	U
LNXX-LE		103	63.80	3	U
LNXX-LN		103	75.60	3	U
LNXX-LT		103	58.70	3	U
LNXX-UC		103	231.20	3	U
LNXX-UD		103	449.20	3	U
LNXX-UE		103	655.50	3	U
LP29-KE		93	1063.00	3	U
LP29-S3	I D	93	24440.00	3	U
LP29-V3	I D	93	24440.00	3	U
LP37-S3	I D	93	12540.00	3	U
LP37-V3	I D	93	12540.00	3	U
LP37K-AE		93	1063.00	3	U
LPS20-AE	I	81	19470.00	3	U
LPS2X-AA		115	160.80	3	U
LPS2X-AB		115	74.00	3	U
LPS2X-AC		115	174.40	3	U
LPS40-D3	I	81	33920.00	3	U
LPS40-F3	I	81	33920.00	3	U
LPS4X-AA		115	158.20	3	U
LPS4X-AB		114	158.20	3	U
LPS4X-AC		114	31.00	3	U
LPS4X-BA		98	84.10	3	U
LPS4X-BB		98	109.70	3	U
LQP02-NC		106	35.80	3	U
LQP03-KA		111	39.00	3	U
LQP03-MA		107	54.10	3	U
LQP03-MB		107	54.10	3	U
LQP03-MC		107	54.10	3	U
LQP03-MD		107	54.10	3	U
LQP03-MH		107	54.10	3	U
LQP03-NS		107	54.10	3	U
LVPXX-AK		109	26.40	3	U

M

Part No.		Page No.s	Prices £	Discounts EU	OEM
MS01-AA	I	21,32,138	795.00	3	X
MS02-AA	D	23,138	3498.00	3	X
MS220-AA	I	33,138	19080.00	3	U
MS400-CA	I	138	4770.00	3	X
MS42-AB	I	27,138	795.00	3	X
MS42-BA	I	18,27,138	2385.00	3	X
MS42-CA	I	18,27,138	3180.00	3	X
MS42-KA	I	18,27,138	1590.00	3	X
MS44-AA	I	18,138	1113.00	3	X
MS44-BA	I	32,138	2226.00	3	X
MS44-DA	I	32,138	12720.00	3	X
MS62A-AB	I	138	25440.00	3	5
MS630-BB	I	138	2184.00	8	X
MS630-CA	I	138	5460.00	8	X
MS60-AF	I	29,138	4770.00	3	U
MS650-BF	I	29,33,138	9540.00	3	U
MS65A-BA	I	138	26240.00	3	5
MS65A-CA	I	138	50880.00	3	5
MS65A-DA	I	138	87450.00	3	5
MS670-BA	I	31,138	19080.00	3	U
MS820-CA	I	138	11130.00	3	3
MS86-DA	I	138	38160.00	3	5
MS88-CA	I	138	9540.00	3	5
MS88-DA	I	138	38160.00	3	5

P

Part No.		Page No.s	Prices £	Discounts EU	OEM
PC620-A3	D	11	1821.00	3	X
PC625-A3	D	11	2166.00	3	X
PC626-A3	D	11	2545.00	3	X
PC62M-AA	I	11	565.80	3	X
PC62M-AB	I	11	400.20	3	X
PC62M-BA	I	11	527.20	3	X
PC62P-AA	I	11	392.60	3	X
PC62R-AA	I	11	188.40	3	X
PC62R-BA	I	11	188.40	3	X
PC62R-CA	I	11	563.00	3	X
PC62R-DA	I	11	1432.00	3	X
PC62S-AA	D	11	113.90	3	X
PC62T-AA	I	11	412.60	3	X
PC62T-BA	I	11	574.80	3	X
PC640-A3	D	11	928.80	3	X
PC641-A3	D	11	782.50	3	X
PC645-A3	D	11	1146.00	3	X
PC646-A3	D	11	1327.00	3	X
PC64M-AA	I	11	634.70	3	X
PC64M-AB	I	11	448.90	3	X
PC64M-BA	I	11	405.60	3	X
PC64P-AA	I	11	250.00	3	X
PC64R-AA	I	11	121.40	3	X
PC64R-BA	I	11	476.80	3	X
PC64R-CA	I	11	563.00	3	X
PC64S-AA	D	11	113.90	3	X
PC64T-AA	I	11	412.60	3	X
PC661-A3	D	12	2627.00	3	X
PC665-A3	D	12	3330.00	3	X
PC666-A3	D	12	3933.00	3	X
PC66M-AA	I	12	1530.00	3	X
PC675-A3	D	13	7784.00	3	X
PC676-A3	D	13	8856.00	3	X
PC677-A3	D	13	9913.00	3	X
PC6CC-AE	D	11,12,13	13.80	3	X
PC6XL-AE	D	11	130.40	3	X
PC6XL-CE	C	12,13	113.90	3	X
PC6XM-AB	I	12	426.00	3	X
PC6XM-CB	I	12	1093.00	3	X
PC6XM-DA	I	13	600.30	3	X
PC6XM-DB	I	13	1152.00	3	X
PC6XQ-AA	C	11,12,13	56.60	3	X
PC6XQ-BA	C	11,12,13	96.60	3	X
PC6XQ-DA	C	11,12,13	351.90	3	X
PC6XR-BC	I	13	1049.00	3	X
PC6XR-CC	I	13	1884.00	3	X
PC6XR-DB	I	12	1049.00	3	X
PC6XR-DC	I	13	2981.00	3	X
PC6XR-EA	I	12,13	200.10	3	X
PC6XR-EB	I	12	1884.00	3	X
PC6XR-EC	I	13	4444.00	3	X
PC6XR-FA	I	12,13	121.40	3	X
PC6XT-BA	I	12,13	49.10	3	U
PC6XT-BB	I	12,13	607.20	3	X
PC6XT-CA	I	12,13	49.10	3	U
PC6XT-CB	I	13	1125.00	3	X
PC6XT-DA	I	13	45.30	3	U
PC6XV-A3	D	11,12,13	163.50	3	X
PC6XV-B3	D	11,12,13	472.00	3	X
PC6XV-E3	D	12,13	945.30	3	X
PCXXA-PC		116	12.70	3	U
PM100-BD	D	21	3971.00	3	2
PM100-BU	D	21	5561.00	3	2
PM100-JD	D	21	8387.00	3	2
PM200-AD	D	21	5561.00	3	2
PM200-AJ	D	21	8741.00	3	2
PM200-AU	D	21	6754.00	3	2
PM200-CJ	D	21	10330.00	3	2
PM200-JD	D	21	7549.00	3	2
PM200-JU	D	21	8741.00	3	2
PM200-LJ	D	21	12320.00	3	2
PM361-BE	D	23	11920.00	3	2
PM361-BH	D	23	13120.00	3	2
PM361-BL	D	23	15110.00	3	2
PM361-ME	D	23	14700.00	3	2
PM361-MH	D	23	15900.00	3	2
PM361-ML	D	23	17890.00	3	2
PM362-BL	D	23	17090.00	3	2
PM362-DL	D	23	20590.00	3	2
PM362-ML	D	23	19880.00	3	2
PM362-PL	D	23	23370.00	3	2
PM363-DL	D	23	22180.00	3	2
PM363-PL	D	23	24960.00	3	2
PM364-DL	D	23	27750.00	3	2
PM364-PL	D	23	30530.00	3	2
PM365-EL	D	23	42770.00	3	2
PM365-RL	D	23	45550.00	3	2
PM369-PZ	D	23	18200.00	3	2
PV010-BD	D	18	4603.00	3	2
PV010-BM	D	18	7020.00	3	2
PV010-BY	D	18	8976.00	3	2
PV010-CD	D	18	5398.00	3	2
PV010-CJ	D	18	9771.00	3	2
PV010-CM	D	18	7815.0	3	2
PV010-CY	D	18	9771.00	3	2
PV012-BD	D	18	7902.00	3	2
PV012-BM	D	18	10320.00	3	2
PV012-BY	D	18	12270.00	3	2
PV012-CD	D	18	8697.00	3	2
PV012-CJ	D	18	13150.00	3	2
PV012-CM	D	18	11110.00	3	2
PV012-CY	D	18	13070.00	3	2
PV013-BM	D	18	10320.00	3	2
PV013-BY	D	18	12270.00	3	2
PV014-BD	D	18	9174.00	3	2
PV014-BM	D	18	11590.00	3	2
PV014-BY	D	18	13550.00	3	2
PV014-CD	D	18	10130.00	3	2
PV014-CM	D	18	12550.00	3	2
PV014-CY	D	18	14340.00	3	2
PV016-BD	D	18	6591.00	3	2
PV016-BY	D	18	10960.00	3	2
PV016-CD	D	18	7386.00	3	2
PV016-CM	D	18	9802.00	3	2
PV016-CY	D	18	11760.00	3	2
PV01K-AE	D	18	174.90	3	2
PV053-BM	D	18	17120.00	3	2
PV053-CD	D	18	13860.00	3	2
PV053-CY	D	18	18240.00	3	2
PV110-BD	D	18	6193.00	3	2
PV110-BJ	D	18	10570.00	3	2
PV110-BM	D	18	8610.00	3	2
PV110-BY	D	18	10570.00	3	2
PV110-CD	D	18	6988.00	3	2
PV110-CJ	D	18	11360.00	3	2
PV110-CM	D	18	9405.00	3	2
PV110-CY	D	18	11360.00	3	2
PV112-BD	D	18	9453.00	3	2
PV112-BJ	D	18	14060.00	3	2
PV112-BM	D	18	12110.00	3	2
PV112-BY	D	18	14060.00	3	2
PV112-CD	D	18	10490.00	3	2
PV112-CJ	D	18	14860.00	3	2
PV112-CM	D	18	12900.00	3	2
PV112-CY	D	18	14860.00	3	2
PV113-BM	D	18	12110.00	3	2
PV113-BY	D	18	14060.00	3	2
PV113-CJ	D	18	14860.00	3	2
PV114-BD	D	18	10960.00	3	2
PV114-BM	D	18	13380.00	3	2
PV114-BY	D	18	15340.00	3	2
PV114-CD	D	18	11760.00	3	2
PV114-CM	D	18	14170.00	3	2
PV114-CY	D	18	16130.00	3	2
PV116-CD	D	18	8976.00	3	2
PV116-CJ	D	18	13350.00	3	2
PV116-CM	D	18	11390.00	3	2
PV116-CY	D	18	13350.00	3	2
PV11K-AE	D	18	174.90	3	U
PV11U-AA	I	18	4770.00	3	2
PV11U-BA	I	18	5168.00	3	2
PV11U-CA	I	18	5168.00	3	2
PV153-CD	D	18	15450.00	3	2
PV153-CM	D	18	18710.00	3	2
PV153-CY	D	18	19830.00	3	2
PV15U-AA	I	18	5168.00	3	2
PV410-BD	D	18	9373.00	3	2
PV410-CF	D	18	13430.00	3	2
PV413-CF	D	18	15730.00	3	2
PV413-CJ	D	18	17640.00	3	2
PV413-CY	D	18	17640.00	3	2
PV416-CF	D	18	14620.00	3	2
PV416-CJ	D	18	16530.00	3	2
PV416-CY	D	18	16530.00	3	2
PV41K-AE	D	18,72	174.90	3	X

Q

Part No.		Page No.s	Prices £	Discounts EU	OEM
QA-001AA-GZ		116	1870.00	3	U
QA-001AA-H5	C	29,31	3176.00	3	U
QA-001AE-GZ		116	42.50	3	U
QA-001AM-GZ		116	637.50	3	U
QA-001AR-GZ		116	85.00	3	U
QA-015AA-GZ		116	72.30	3	U
QA-03KAA-H#	C	36	571.60	3	U
QA-056AA-GZ		116	148.80	3	U
QA-071AA-GZ		116	366.30	3	U
QA-095AA-GZ		116	255.00	3	U
QA-099AA-GZ		116	153.00	3	U
QA-09SAA-GZ		116	127.50	3	U
QA-09SAA-H5	C	27,29,31	1252.00	3	U
QA-09SAB-GZ		116	68.00	3	U
QA-09SAB-H5	C	18	1252.00	3	U
QA-100AA-GZ		116	85.00	3	U
QA-126AA-GZ		116	127.50	3	U
QA-797AA-H*	C	81	647.90	3	U
QA-798AA-H*	C	81	306.10	3	U
QA897AA-GZ		116	204.00	3	U
QA-898AA-GZ		116	255.00	3	U
QA-A96AA-H5	C	18	413.40	3	U
QA-AABEA-GZ		116	209.10	3	U
QA-S01AA-GZ		44	340.00	3	U
QA-S01AA-H#	C	44	477.00	3	U

Part Number Index

Part No.		Page No.s	Prices £	Discounts EU	OEM
QA-VCBAA-H#	C	35	361.70	3	U
QA-VD2AA-GZ		116	412.30	3	U
QA-VD7AA-GZ		116	161.50	3	U
QA-VDEAA-H#	C	35	361.70	3	U
QA-VE3AA-H5	C	69	282.20	3	U
QA-VE3AA-HM	C	69	282.20	3	U
QA-VEFAA-H5	C	83	322.00	3	U
QA-VEFAA-HM	C	83	322.00	3	U
QA-VF9AA-H5	C	79	353.80	3	U
QA-VF9AA-HM	C	79	353.80	3	U
QA-VI8AA-GZ		44	297.50	3	U
QA-VI8AA-H#	C	44	441.20	3	U
QA-VI9AA-H#	C	44	576.40	3	U
QA-VIAAA-GZ		44	272.00	3	U
QA-VIAAA-H#	C	44	485.00	3	U
QA-VT7AA-H*	C	37	314.00	3	U
QA-VTMAA-H#	C	40	343.50	3	U
QA-VTNAA-H#	C	40	343.50	3	U
QA-VTUAA-H*	C	35	459.50	3	U
QA-VTVAA-H*	C	35	459.50	3	U
QA-VUHAA-GZ		44	191.30	3	U
QA-VUHAA-H#	C	44	556.50	3	U
QA-VV1AA-H5	C	21,23	1268.00	3	U
QA-VV1AA-H8	C	23	1268.00	3	U
QA-VV8AA-H8	C	18	473.00	3	U
QA-VV9AB-H#	C	36	357.80	3	U
QA-VVFEA-GZ		116	176.00	3	U
QA-VVMAA-H*	C	81	333.90	3	U
QA-VVZAA-H*	C	81	333.90	3	U
QA-VWJ8A-A8	C	29,31	791.00	3	U
QA-VWJ8A-H8	C	29,31	2063.00	3	U
QA-VWJ8B-H8	C	18,27,29,31	552.50	3	U
QA-VYR8A-G8	C	18,29,31	632.00	3	U
QA-VYVAA-H5	C	32,33	2302.00	3	U
QA-VZHAA-H*	C	37	314.00	3	U
QA-VZPAA-H#	C	83	206.70	3	U
QA-YFWAA-HC	C	13	326.00	3	U
QA-YG6AA-GZ		45	157.30	3	U
QA-YG6AA-H*	C	45	254.40	3	U
QAYG6AB-H*	C	45	254.40	3	U
QA-YG6AC-HB	C	45	254.40	3	U
QA-YMCAA-H5	C	21	306.10	3	U
QA-YT9AA-H5	C	21,33	413.40	3	U
QB-YN2EW-VA	C	13	525.00	3	U
QB-YN8EW-VA	C	12,13	895.00	3	U
QJ668-GZ		116	106.30	3	U
QL-001A2-B4	C	31	10010.00	3	U
QL-001AP-BU	C	27	2503.00	3	U
QL-001AP-BV	C	27	2503.00	3	U
QL-001AP-BW	C	27	2503.00	3	U
QL-001AS-B2	C	29	7508.00	3	U
QL-001AS-BW	C	29	3754.00	3	U
QL-001AS-BX	C	29	7508.00	3	U
QL-001AS-BY	C	29	7508.00	3	U
QL-0TLA9-AA	C	51	177.50	3	U
QL-716AN-AA	C	32	809.90	3	U
QL-VE3A*-AA	C	69	☎	☎	☎
QL-VEFA*-AA	C	83	☎	☎	☎
QL-VV1A8-B5	C	21,23	1003.00	3	U
QL-VV1A8-B6	C	21,23	1338.00	3	U
QL-VV1A8-B8	C	21,23	668.90	3	U
QL-VV1A8-B9	C	23	2499.00	3	U
QL-VV1A8-BS	C	23	2674.00	3	U
QL-VV1A8-BT	C	23	2499.00	3	U
QL-VYVA8-B6	C	32,33	1338.00	3	U
QL-VYVA8-B8	C	32,33	668.90	3	U
QL-VYVA8-B9	C	32,33	2499.00	3	U
QL-VYVA8-BS	C	32,33	2674.00	3	U
QL-VYVA8-BT	C	32,33	2499.00	3	U
QL-VZPA9-PB	C	83	827.90	3	U
QL-YFWAW-AA	C	13,51	177.50	3	U
QL-YL5AA-AA	C	21	1274.00	3	U
QL-YT9AS-AA	C	33	4177.00	3	U
QZ-K048A-GZ		33	89.00	3	3
QZ-K14AA-U5	C	31,33	178.00	3	3

R

R400X-B9	I	31,33,132	1785.00	3	X
RA60-P		121	660.60	3	U
RA60-PE		121	743.80	3	U
RA70E-SF	I	129	7650.00	3	U
RA82-AD	I	129	10570.00	3	U
RA82-CD	I D	129	10570.00	3	U
RA90-CD	I D	129	20760.00	3	U
RA90-NA	I	129	18880.00	3	U
RA92-CD	I D	129	21140.00	3	U
RA92-NA	I	129	18120.00	3	U
RBV20-PD	I D	133	28310.00	3	U
RC25K-DC		119	254.20	3	U
RD54-EA	I	132	3935.00	3	X
RD54-F3	D	132	5048.00	3	X
RD54A-BA	I	132	3935.00	3	X
RF30-RA	C	132	3458.00	3	X
RF30B-DB	I	29,132	3299.00	3	X
RF30B-KB	I	132	5684.00	3	X
RF30C-DB	I	29	5883.00	3	X
RF30E-SF	I	29,33,132	2584.00	3	X
RF31B-DB	I	29,132	5486.00	3	X
RF31E-AF	I	31,33,132	4770.00	3	X
RF31E-SF	I	29,132	4770.00	3	X
RF71-RA	C	132	7632.00	3	X
RF71B-KB	I	132	9858.00	3	X
RF71E-SF	I	29,33,132	6758.00	3	X
RF72B-DB	I	132	10260.00	3	X
RF72E-AF	I	31,33,132	9540.00	3	X
RF72E-SF	I	132	9540.00	3	X
RFXX-CK		121	79.50	3	U
RK05K-08		119	95.20	3	U
RK05K-11		119	95.20	3	U
RK06K-EF		119	501.50	3	U
RK07K-EF		119	633.30	3	U
RL01K-DC		119	165.80	3	U
RL01K-EF		119	255.00	3	U
RL02K-DC		119	195.50	3	U
RL02K-EF		119	289.00	3	U
RM03-PX		121	403.80	3	U
RM05-PX		121	1020.00	3	U
RP06-PX		121	807.50	3	U
RQDX3-BA	I	133	1856.00	3	X
RRD40-F3	D	19,31,33	1272.00	3	X
RRD40-SG	I	29	1988.00	3	X
RSV20-PD	I D	133	26430.00	3	U
RV02K-01		120,133	302.00	3	U
RV20-B	I D	133	18880.00	3	U
RX23-EH	D	19	477.00	3	X
RX23-UK	C	19,132	477.00	3	X
RX33-UK	C	19,132	477.00	3	X
RXA3K-HC		117	19.60	3	U
RXA5K-HC		117	22.70	3	U
RXA8K-HC		117	30.20	3	U
RZ23-EF	I	19,132	1193.00	3	X
RZ23-EH	D	19,132	1193.00	3	X
RZ23-FF	I	19,132	1193.00	3	X
RZ24-EF	I	19,132	1988.00	3	X
RZ24-EH	D	19,132	1988.00	3	X
RZ24-FF	I	19,132	1988.00	3	X
RZ55-UK	C	19,132	2783.00	3	X
RZ56-UK	C	19,132	3896.00	3	X
RZ56E-AF	I	19,33,132	3896.00	3	X
RZ57-UK	C	19,132	5565.00	3	X
RZ57E-AF	I	19,33,132	5565.00	3	X

S

SA482-AD	I D	129	41040.00	3	U
SA482-HD	I D	129	21140.00	3	U
SA600-CD	I D	129	20760.00	3	U
SA600-FD	I D	129	38880.00	3	U
SA600-HD	I D	129	74750.00	3	U
SA600-JD	I D	129	142700.00	3	U
SA650-FD	I D	129	66060.00	3	U
SA650-HD	I D	129	101900.00	3	U
SA650-JD	I D	129	161400.00	3	U
SA70-HK	I	129	15100.00	3	U
SA70-JK	I	129	27180.00	3	U
SA800-CD	I D	129	21140.00	3	U
SA800-FD	I D	129	38510.00	3	U
SA800-HD	I D	129	73990.00	3	U
SA800-JD	I D	129	145000.00	3	U
SA800-LD	I D	129	263500.00	3	U
SA850-FD	I D	129	65690.00	3	U
SA850-HD	I D	129	101200.00	3	U
SA850-JD	I D	129	154900.00	3	U
SZ12A-AB	C	19,132	5963.00	3	X
SZ12A-HB	C	19	4611.00	3	X
SZ12A-LB	C	19	3657.00	3	X
SZ12A-XB	C	19,132	3180.00	3	X
SZ12B-BB	C	19,132	8189.00	3	X
SZ12B-HB	C	19	5724.00	3	X
SZ12B-XB	C	19,132	4293.00	3	X
SZ12C-CB	C	19,132	11530.00	3	X
SZ12C-XB	C	19,132	5963.00	3	X
SZ12X-EB	C	19,135	1829.00	3	X
SZ12X-HB	C	19,135	1829.00	3	X
SZ12X-LB	C	19,132	874.50	3	X
SX12X-MB	C	19,132	874.50	3	X

T

TA90-BB	I D	135	91950.00	3	U
TA90E-BB	I D	135	101400.00	3	U
TA90E-UG	I D	135	9438.00	3	U
TA90K-HC		117	113.30	3	U
TK25-K		120	27.80	3	U
TK50-AA	I	135	2226.00	3	X
TK50Z-G3	C	19,135	2783.00	3	X
TK70-AA	I	135	3657.00	3	X
TK70E-AF	I	31,33,135	3657.00	3	X
TK70E-SF	I	29,135	3657.00	3	X
TKXX-HC		117	30.20	3	U
TKXXR-HC		117	30.20	3	U
TLZ04-CB		120	56.60	3	U
TLZ04-FA	C	19,135	4373.00	3	X
TLZ04-GA	C	19,29,31,135	4373.00	3	X
TLZ04-HA		117	11.30	3	U
TLZ04-JF	I	19,31,135	3896.00	3	X
TLZ04-LA	I	135	4571.00	3	X
TLZ04-LB	I	135	4571.00	3	X
TLZ04-MA	I	19,135	4571.00	3	X
TLZ04-MB	I	19,135	4571.00	3	X
TQK50-AA	I	135	874.50	3	X
TQK70-AA	I	135	1113.00	3	X
TQK70-BA	I	135	1113.00	3	X
TQK70-SF	I	29,31, 33,135	1113.00	3	X
TSV05-SF	I D	135	10180.00	3	U
TSZ05-AB	I D	135	5728.00	3	X
TSZ05-KE	I	135	273.00	3	X
TU60-K		120	8.50	3	U
TU81E-BB	I D	135	23290.00	3	U
TU81E-SG	I D	135	21700.00	U	2
TU90-BB	I D	135	35680.00	3	U
TUC03		116	14.30	3	U
TZ30-EF	I	19,135	1431.00	3	X
TZ30-EH	D	19,135	1431.00	3	X
TZ30-UK	C	19,135	1431.00	3	X
TZK10-FG	I	19,135	1431.00	3	X
TZK10-UK	C	19,135	1431.00	3	X
TZK1X-CB		120	166.10	3	U
TZK1X-CD		120	283.10	3	U
TZK1X-HA		117	34.00	3	U

U

UK-H3111-01		58	32.50	3	X
UK-H3111-02		58	32.50	3	X
UK-H3111-03		58	32.50	3	X

V

VS42D-JH	I	18	795.00	3	2
VSX10-A3	D	23	2275.00	3	X
VSX20-A3	D	23	1365.00	3	X
VSX30-A3	D	23	1593.00	3	X
VSXXX-AA	C	69	159.30	3	X
VSXXX-AB	C	18,69	905.50	3	X
VT330-GE	C	69	1355.00	U	X
VT330-HE	C	69	1355.00	U	X
VT330-JE	C	69	1355.00	U	X
VT330-KE	C	69	1355.00	U	X
VT330-LE	C	69	1355.00	U	X
VT330-ME	C	69	1355.00	U	X
VT340-GE	C	69	1959.00	U	X
VT340-KE	C	69	1959.00	U	X
VT3XX-CA		100	15.90	3	U
VT3XX-DA		98	9.80	3	U
VT3XX-DB		98	9.80	3	U
VT3XX-DC		98	9.80	3	U
VT420-AE	C	67	450.00	U	X
VT420-BE	C	67	450.00	U	X
VT420-CE	C	67	450.00	U	X
VT420-DE	C	67	450.00	U	X
VT420-EE	C	67	450.00	U	X
VT420-FE	C	67	450.00	U	X
VX100-GE	C	71	2302.00	U	X
VX100-HE	C	71	2858.00	U	X
VX100-IE	C	71	2302.00	U	X
VX100-JE	C	71	2858.00	U	X
VX10X-MD	C	71,108	314.00	3	U
VX130-AB	C	72	5020.00	U	X
VX130-AE	C	72	5020.00	U	X
VX130-BB	C	72	5020.00	U	X
VX130-BE	C	72	5020.00	U	X

W

WS01X-GD	I	18	6678.00	3	X

Guide to installation symbols

I Free installation by Digital

C Designed to be installed by customers

D Designed to be installed by customers. Free assistance given if required

Products without an installation code, as given above, are either non-consumable items, like acoustic hoods which carry 12 months RTD (Return to Digital) warranty or, consumable items such as paper or ribbons, which carry 3 months RTD warranty on defective goods.

☎ = PHONE FOR DETAILS

D = 72 HOUR DELIVERY

Discounts are only available to customers with current DBA's

Standard Terms and Conditions for the Supply of Computer Products

The following are the Terms and Conditions under which Digital Equipment Co. Limited ("Digital") sells and licenses Products and Distributed Software in the United Kingdom, the Channel Islands and the Isle of Man.

1. Definitions

1.1 "Equipment" means computer systems (excluding software), related Hardware, accessories, and spare parts listed in the Price List. Equipment may be manufactured using refurbished components or may have been used internally for reliability testing. Spare parts may be refurbished.

1.2 "Software" means software products (including databases and diagnostics), listed in the Price List, supplied with Equipment, or otherwise supplied or developed by Digital including packaged application Software and Software supplied in connection with services. The term "Software" applies to all parts of Software, including Product Authorisation keys ("PAKs") and to new releases, updates and modifications of Software but does not include Distributed Software.

1.3 "Distributed Software" means third-party software products, including databases, licensed directly to purchaser by a third party and identified as such.

1.4 "Documentation" means manuals, handbooks, maintenance libraries, and other publications listed in the Price List or supplied with Equipment or Software listed in the Price List or supplied in connection with services. The term "Documentation" does not include Software Product Descriptions, Service Descriptions, Software, or Distributed Software.

1.5 "Products" means Equipment, Software, Documentation and services provided with Equipment and Software (e.g., installation, training and warranty services) or other Products furnished under these Terms and Conditions, but does not include Distributed Software. For Software, other licensed Products and Distributed Software, the term "Purchaser" means licensee.

1.6 "Price List" means Digital's published price list which is (a) applicable to the Products which are the subject of a particular order, and (b) current when the order is accepted.

1.7 "Software Product Description" ("SPD") means any document of this name and any addenda thereto which provides Software specifications, warranty, and licence information for Software described therein.

1.8 "Service Description" means any document of this name which provides information regarding Digital's maintenance and training services.

2. Delivery

Delivery will be to any address in the United Kingdom, the Channel Islands or the Isle of Man designated by Purchaser. All risks of loss or damage to Products and Distributed Software shall pass to Purchaser at the time of delivery. Digital shall not be liable for any delay in delivery due to causes beyond its reasonable control.

3. Installation

Products and Distributed Software will be installed by Digital at Purchaser's premises in the United Kingdom, the Channel Islands or the Isle of Man if the price includes installation or if Purchaser separately purchases installation services. The availability of installation is specified in the Price List. Installation shall be deemed complete upon the successful execution of Digital's diagnostic programs. Purchaser is responsible for the preparation of a safe and suitable site in accordance with Digital's site specifications. Additional installation charges may be imposed if Digital is prevented from installing the Products for more than thirty (30) days after delivery.

4. Warranty

4.1 Equipment
Equipment is warranted by Digital to Purchaser against defects in workmanship and material during the applicable warranty period.

4.1.1 The warranty period for Equipment is specified in the Price List and begins either: (a) on the date installation is completed; or (b) if the Equipment is not installed by Digital upon delivery; or (c) if Digital is prevented from installing the Equipment by any cause beyond its control for more than thirty (30) days from the delivery date, on the thirtieth (30th) day after delivery.

4.1.2 Warranty service will be provided at either Purchaser's premises or a Digital repair facility, as specified in the Price List.

4.2 Software
Digital warrants to Purchaser that Software designated as warranted in the SPD or the Price List will conform to the SPD applicable to the Software at the time an order is accepted. The term of the warranty and the manner in which Digital will remedy any non-conformance is specified in the SPD or the Price List. Digital does not warrant that the execution of Software shall be uninterrupted or error-free.

4.3 Distributed Software and Documentation
Digital does not warrant the form or content of Distributed Software or Documentation. Certain Distributed Software is warranted by the licensor.

4.4 Limitation of Warranty
The warranties provided in Paragraphs 4.1 and 4.2 are limited warranties and do not apply if:

4.4.1 any product, other than Equipment or Software, is sold or licensed by Digital (any such product is warranted directly to Purchaser by a third party, or provided without warranty); or

4.4.2 the condition of Equipment or Software is a result of its improper use or the operation of the Equipment outside the specified environmental conditions; or

4.4.3 the condition of Equipment or Software is a result of any incident or cause which occurs after delivery including but not limited to fire, flood and any attempt by Purchaser or a third party to repair Equipment; or

4.4.4 the condition of Equipment or Software is a result of modifications made by any party other than Digital.

4.5 Remedies
In all situations involving performance or non-performance of Equipment and Software furnished hereunder, Purchaser's remedy shall be (a) repair or replacement by Digital (at Digital's option) of defective Equipment if notified by Purchaser of the defect within the warranty period, or (b) remedy by Digital in the manner specified in the SPD of any non-conformance of Software to the applicable SPD during the stated warranty period.

4.6 Disclaimer of Warranties
Except for the express warranties stated above, Digital disclaims all other warranties or conditions whether express or implied in law.

5. Prices and Fees

Prices and fees for Products and Distributed Software will be as specified in an authorised Digital quotation, which is current at the time an order is accepted, or in the absence of a quotation, will be Digital's standard prices and fees specified in the Price List. Fees for Software licensed under a Periodic Payment Licence ("PPL") may be changed by Digital upon ninety (90) days' written notice. The prices in this catalogue are subject to change without notice.

6. Payment

6.1 Payment for Products and Distributed Software is due thirty (30) days from the date of invoice provided Purchaser maintains credit arrangements satisfactory to Digital. Otherwise, payment is due on or before delivery.

6.2 Where the Purchaser fails to maintain a satisfactory credit arrangement which prevents Digital from delivering the products, such Products shall be deemed cancelled and Purchaser shall pay the charges detailed in Paragraph 8.

6.3 In the event of non-payment under Paragraph 6.1, Digital may, at its option and without prejudice to any other remedy at any time after payment has become due, enter Purchaser's premises and take possession of the Product(s) listed on the relevant order acceptance form. This right shall continue until payment in full as set out in Paragraph 6.4 is received by Digital.

6.4 Title to Equipment is warranted by Digital and shall pass to Purchaser when prices, taxes and charges due hereunder are paid in full.

7. Taxes

Prices and fees include import duty (when applicable) in effect at the date of order acceptance. Prices and fees are exclusive of, and purchaser is responsible for, all other duties or taxes. Value Added Tax shall be charged at the rate in effect on the date of invoice.

8. Cancellation and Rescheduling Charges

Cancellation or rescheduling by Purchaser of an order for Products or Distributed Software thirty (30) days or less prior to the acknowledged delivery date will be subject to a charge to Purchaser of five per cent (5%) of the list price of the Products or Distributed Software up to a maximum of seven thousand pounds (£7,000). Rescheduling of an order is subject to acceptance by Digital.

9. Software Licence

9.1 No title to Software is transferred
Digital transfers no title to or ownership in Software (or any other Software) to Purchaser or to any third party. Except as explicitly set forth in these Terms and Conditions, Purchaser shall not use, copy or modify Software in any way.

9.2 The right to transfer Software is limited
Neither Software, Software licenses nor Software documentation may be transferred or otherwise made available to third parties without the express written consent of Digital. Purchaser may however make Software and Software Documentation available to its employees and agents to the extent necessary to enable Purchaser to exercise its licence rights as defined below.

9.3 The licence to use Software is limited
Software may be used by Purchaser only upon grant of a licence by Digital. A Software licence is a personal, non-exclusive right to use Software and is granted by Digital only upon Digital's written acceptance of Purchaser's order for a Software licence. The right to use is a right only to execute and load, copy or transmit to the extent necessary for such execution. Electronic storage media which Purchaser receives from Digital may include extra Software for which no licence has been ordered; if Purchaser wishes to use this Software, Purchaser must order a licence from Digital.

9.4 Software may be used only on the Licenced Processor
Except for use on a temporary basis on another single processor or equipment configuration during malfunction of the Licenced Processor, Software may be used only on the Licenced Processor. The term "Licenced Processor" is defined as the Processor or Equipment configuration (including any processor within a group of processors co-operating under VAXcluster Software) ordered with the Software licence or, if the Software licence is ordered separately, the processor or Equipment configuration on which the Software is first used.
The Licenced Processor must be of the type specified in the licence grant.
A licence may be transferred to a different processor in accordance with Digital's transfer policy provided that Digital approves the transfer in writing.

9.5 The right to make copies is limited
Copies of Software licensed to Purchaser may be made only: (i) for use on the Licenced Processor for back-up or security purposes; or (ii) where Digital has granted an additional licence to use such copy on another Licenced Processor. Modification and merger of Software to make adaptations in machine readable form is permitted for Purchaser's own use on the Licenced Processor. Purchaser agrees to reproduce all Digital and non-Digital copyright and other proprietary notices on all such copies, modifications and mergers. Any part of software included in modifications or mergers remains subject to these Terms and Conditions.

9.6 Additional licence Terms and Conditions may apply
If Purchaser orders certain licenses, additional Terms and Conditions may apply as indicated in the Price List, the applicable SPD, or service description. In particular, use of Software may not exceed the licensed rating (in the case of Clusterwide licenses), the number of users (in the case of User-based licenses), or certain specific users (in the case of Personal licenses) for which Purchaser is licensed. Licence ratings, number of and names of users are as specified by Digital or its associated companies. Additional Terms and Conditions apply to all licenses for source code Software. Purchaser must execute an appropriate source code licence agreement to obtain a source code licence.

9.7 No interference with PAKs is allowed
Purchaser agrees to comply with and not deliberately modify or make inoperable any PAK or other feature which is incorporated into Software to prevent access to unlicensed Software.

9.8 No reverse engineering is allowed
Purchaser shall not decompile, reverse assemble, analyse or otherwise examine Software (including any Hardware or Firmware implementation of Software) for the purpose of reverse engineering.

9.9 New licenses are necessary for new versions
Updates, modifications and new versions of Software are covered by these licence Terms and Conditions and require a separate licence, media kit, and additional fees. They may be used only on the original Licenced Processor.

9.10 Purchaser must keep records

Purchaser shall maintain accurate records which uniquely identify the Licenced Processor on which Software is used and the corresponding Software licence. Where Purchaser has been issued with a PAK, the entry of the data from the PAK into the Licence Management Facility and retention of the PAK shall satisfy this record keeping requirement.

Upon request, Purchase shall allow Digital access to Purchaser's processors and records sufficient to determine Purchaser's proper use of Software

9.11 Digital may terminate licence in the event of breach

Digital may terminate any licence in the event that Purchaser is in breach of any of these Terms and Conditions and fails to remedy such breach within ten (10) days of the sending of a letter, fax, or telex to Purchaser informing Purchaser of such breach.

In the event of termination, Purchaser will (a) return to Digital all relevant licence certificates and PAKs, (b) destroy all copies of Software, including any parts of Software previously covered by the terminated licenses, and (c) certify in writing to Digital that such destruction has taken place.

9.12 Separate licence terms for Distributed Software

Purchaser shall comply with the separate Terms and Conditions applicable to Distributed Software, details of which are available on request.

10. Patents and Copyrights

Digital shall defend, at its expense, any claim brought against Purchaser alledging that any Equipment, Software or Documentation furnished hereunder infringes any United Kingdom patent, copyright, or semiconductor topography right, and shall pay all costs and damages finally awarded, provided that Purchaser gives Digital prompt written notice of such claim, and information, reasonable assistance and sole authority to defend or settle such claim. In the defence or settlement of any such claim Digital may obtain for Purchaser the right to continue using the Equipment, Software or Documentation, replace or modify the Equipment, Software or Documentation so they become non-infringing or, if such remedies are not reasonably available, may grant Purchaser a credit for any such Equipment, Software or Documentation as depreciated and accept its return. Digital shall not be liable if the alledged infringement is based upon the use, license or sale of the Equipment, Software or Documentation in combination with other Products (including Software) not furnished by Digital. Digital disclaims all other liability for violation, misappropriation or infringement of intellectual property rights and further disclaims any liability for incidental or consequential damages.

11. Reservation of property rights

11.1 The purchase or use of Digital Products does not convey any right to combine or connect Digital Products, protocols, or system architectures with Products other than authorised Products where Digital has one or more patents covering such combination or connection. Authorised Products are (a) Products covered by an express licence between Digital and Purchaser, (b) Products distributed directly or indirectly by Digital, or (c) Products distributed directly or indirectly by any licensee of Digital whose licence includes the right to resell or sublicense such Products.

11.2 Except as expressly set forth in these Terms and Conditions, Digital grants no right, title, or interest in its intellectual property rights to Purchaser.

12. Maintenance Material

Diagnostic Software, Documentation, Equipment or any other material used by Digital in the performance of installation, warranty, or any other service provided by Digital hereunder may be furnished with Products or stored at Purchaser's premises. Digital grants no title or licence to any such material, which remains the exclusive property of Digital. Purchaser agrees to properly secure such material and not to use it in any manner or make it available to any third party without Digital's prior consent.

13. Export

13.1 Notwithstanding any other provision of these Terms and Conditions, Products including technical information in any form may only be delivered to Purchaser subject to the required export licence or authorisation as required by United States export laws.

13.2 Regardless of any notification made by Purchaser to Digital of the ultimate destination of Products and/or technical information outside the United Kingdom, the Channel Islands or the Isle of Man, it is Purchaser's sole responsibility to obtain the appropriate written consent of Her Majesty's Government and the United States Department of Commerce before exporting from the United Kingdom, the Channel Islands or the Isle of Man, any such Product, technical information or system incorporating any such Product or technical information or portion thereof.

14. Indemnity

14.1 Digital will indemnify Purchaser for direct personal injury or death caused by defects in any of its Products or by the negligence of its employees in connection with the performance of their duties hereunder.

14.2 Digital will indemnify Purchaser for direct damage to property caused by defects in any of its Products or by the negligence of its employees in connection with the performance of their duties hereunder. Digital's total liability under this clause shall be limited to five hundred thousand pounds (£500,000) for any one event or connected events.

14.3 In no one event shall Digital be liable for indirect or consequential losses.

15. Health and Safety

Digital personnel shall be accompanied while on Purchaser's premises for purposes in connection herewith. Purchaser shall take all reasonable precautions to ensure the health and safety of Digital's personnel whilst they are on Purchaser's premises.

16. General Provisions

16.1 These Terms and Conditions will supersede any previous communications, representations or agreements by either party whether verbal or written including any Terms and Conditions on Purchaser's order. Any modification to these Terms and Conditions must be in writing and signed by authorised representatives of Digital and Purchaser.

16.2 SPDs and the provisions in the Price List applicable to Products or Distributed Software which are the subject of Purchaser's order shall be considered part of these Terms and Conditions and are available to Purchaser on request. Digital's acceptance of Purchaser's order will form an agreement subject only to these Term and Conditions.

16.3 Any contract subject to these Terms and Conditions is not assignable without the prior written approval of Digital. The waiver by Digital of any breach of any term of these conditions shall not prevent the subsequent enforcement of that term and shall not be deemed a waiver of any subsequent breach.

16.4 Digital Products are manufactured for standard commercial uses and are not intended to be sold or licensed for use in critical safety systems in nuclear facilities. Digital may require additional contractual safeguards for other nuclear, mass transportation, and aviation applications.

16.5 Digital shall not be responsible for delay or failure to perform its obligations due to causes beyond its reasonable control. Installation, warranty, and other services to be performed at Purchaser's premises may not be performed if Digital reasonably believes conditions at the Purchaser's facility represent a safety or health hazard to any Digital employee.

16.6 If any Product supplied hereunder is transferred to a third party, Purchaser shall take reasonable steps to maintain an adequate record of any such transfer and shall, at Digital's reasonable request, notify such third party of any Digital engineering or product safety notices.

16.7 Acceptance of any Product by Digital for a trade-in will be subject to Digital's Trade-In and Invoicing Policy, current at the time of acceptance by Digital.

16.8 The proper law governing this Agreement shall be English law and the forum for the settling of any dispute hereunder shall be the English Courts.

Digital believes the information in this publication is accurate as of its publication date. However, the information is subject to change without notice and should not be construed as a commitment by Digital. Digital assumes no responsibility for any errors that may appear in this publication.

The following are trademarks of Digital Equipment Corporation: the DIGITAL logo, ALL-IN-1, CI, CompacTape, CORRESPONDENT, DEBET, DEC, DECconnect, DECdecision, DECdirect, DECdisk, DEC EtherWORKS, DECelms, DECfacts, DEClaser, DECmail, DECmate, DECmux, DECmux II, DECnet, DECprinter, DECrouter, DECserver, DECsystem-3100, DECservice, DECspell, DECstation, DECsystem, DECUS, DECwindows, DECwrite, DECwriter Correspondent, DELNI, DELUA, DEMPR, DEQNA, DESTA, DEUNA, DSRVB-AA, DSSI, FDDI, HSC, HSC50, KDA, LA, LA324, LA75 Companion, LN01, LN03, LN03 PLUS, LN03R ScriptPrinter, MASSBUS, MicroVAX, MicroVAX II, MicroVMS, MS630-BA, MS630-BB, MS820-BA, MS820-CA, MS86-DA, MS88-DA, MUXserver, PATHWORKS, PrintServer, PDP, PDP-11, Q-bus, Rainbow, RCD, RD, ReGIS, RSTS, RSTS/E, RSX, RSX-11M, RSX-11M-PLUS, RT, RV20, RX33, RX50, SA, SDI, TA, ThinWire, TK, TQK, TQK50, TS05, TURBOchannel, UDA, ULTRIX, UNIBUS, VAX, VAX 6000, VAX 8200, VAX 8250, VAX 8300, VAX 8350, VAX 8500, VAX 8530, VAX 8550, VAX 8600, VAXBI, VAX C, VAX CDD, VAXcluster, VAX DATATRIEVE, VAXELN, VAX FMS, VAX FORTRAN, VAXmate, VAX Pascal, VAX Performance Advisor, VAX Rdb/VMS, VAXserver, VAXsimPLUS, VAXstation, VAX ScriptPrinter, VAX Volume Shadowing, VMS, VT, VT100, VT300, VT320, VT330, VT1000, WPS, WPS-PLUS, XUI.

The following are 3rd Party trademarks:
20/20 is a trademark of Access Technology, Inc.
Apple is a registered trademark of Apple Computer, Inc.
Canon and CaPSL are trademarks of Canon, Inc.
Centronic is a registered trademark of Centronic Data Computer Corporation.
CG, CG Times, CG Triumvirate are trademarks of Compugraphic Corporation.
COMPAQ is a trademark of COMPAQ Computer Corporation.
Epson MX80 and Graftrax are trademarks of Epson (UK) Ltd.
IBM is the trade name of International Business Machines Corporation.
Intel is a trademark of Intel Corporation.
ITC Souvenir is a registered trademark of International Typeface Corporation.
Lotus and 1-2-3 are registered trademarks of Lotus Development Corporation.
Macintosh is a trademark of Apple Computer, Inc.
MS Chart, MS-COBOL, MS-Compiler, MS DOS, MS-FORTRAN, MS-Macro Assembler, MS-Multiplan, MS Paint, MS-Pascal, MS Project, MS-Windows and OS/2, are the trademarks of Microsoft Corporation.
MIPS is a registered trademark of MIPS Computer.
Multimate is a trademark of Multimate International corporation.
NFS is a trademark of Sun Microsystems, Inc.
OSF, OSF/Motif are trademarks of the Open Software Foundation.
Personal Computer AT, Personal Computer XT, Personal System 2 are trademarks of International Business Machines Corporation.
PostScript is a trademark of Adobe Systems, Inc.
Prestoserve is a trademark of Legato Systems, Inc.
SCO is a trademark of Santa Cruz Operation, Inc.
SoftPC is a registered trademark of Insignia Solutions, Inc.
TEK, TEK 4014 are registered trademarks of Tektronix, Inc.
Tektronix is the registered trade name for Tektronix, Inc
Trinitron is a registered trademark of Sony Corporation
UNIX is a registered trademark of UNIX Systems Laboratories, Inc.
X, X11 and X Window System are trademarks of MIT.
X/Open is a trademark of X/Open Company, Ltd.
XENIX is a registered trademark of Microsoft Corporation.

OFTEL Approval
Electrically powered products set out in this catalogue, and supplied by Digital, comply with the requirements of OFTEL's General Approval NS/G/1234/J/100003.
© Digital Equipment Company Limited, 1991.
All rights reserved. Printed in England.

Publications Subscription

Please Complete All Sections

NAME AND ADDRESS

First Name/Initials

Surname

Mr ☐ Mrs ☐ Miss ☐ Ms ☐ Title

Full Company Name

Corporate Division

Department/Mailstop

Address

Town/City

County

Post Code

Telephone Number and Extension

FAX Number

Telex Number

DDH 391

Act NOW! To ensure future copies

This is a DECdirect free publications subscription. Please simply fill in and return freepost to make sure of your future issues.

YOU AND YOUR COMPANY

Job Title

Does your company have self maintenance? S M ☐

Account No

Information Technology Department	Business Speciality
– Hardware Engineering	1A
– Hardware Planning	1B
– Software Engineering	1C
– Systems Management	1D
– Application Development	1E
– End-User Computing	1F
Sales Department	1G
Marketing Department	1H
Customer Service Department	1I
Finance Department	1J
Production Department	1K
Purchasing Department	1L
Research Department	1M
Education Department	1N
Consultant Department	1O
Business Administration Department	1P

PUBLICATIONS YOU WISH TO RECEIVE

DECdirect HARDWARE	A
DECdirect SOFTWARE	B
DECdirect SOFTWARE Documentation	C
CPU Upgrade Guide	D

YOUR INTEREST AREAS

	User	Purchase Influence	Purchase Authority
VAX Systems			
– Large VAX (8nnn upwards)	V A	V B	V C
– Medium VAX (below 8nnn)	V D	V E	V N
– MicroVAX	V F	V G	V H
– Clusters	V K	V L	V M
– VAX Workstations	W1	W2	W3
RISC Workstations/Systems	W4	W5	W6
Personal Computers	C1	C2	C3
PDP Systems	C4	C5	C6

	User	Purchase Influence	Purchase Authority
Communications			
– Network Controllers	C A	C B	C C
– Terminal Servers	C D	C E	C F
– PC Integration	C G	C H	C K
– LAN Products	C L	C M	C N
– WAN Products	C P	C R	C S
– DECconnect	C T	C V	C W
– Bridges/Repeaters	C X	C Y	C Z
Terminals			
– Monochrome Text	T A	T B	T C
– Colour Text	T D	T E	T F
– Monochrome Graphics	T G	T H	T K
– Colour Graphics	T L	T M	T N
– DECwindows	T P	T R	T S
Printers			
– Desktop Laser	P A	P B	P C
– Network Laser	P D	P E	P F
– Colour	P G	P H	P K
– Line	P L	P M	P N
– Dot Matrix	P P	P R	P S
Image Processing			
– Scanners	I A	I B	I C
– Printers	I D	I E	I F
Mass Storage			
– Reel-to-Reel Tape	MA	MB	MC
– Cassette Tape	MD	ME	MF
– Exchangeable Disks	MG	MH	MK
– Fixed Disks	ML	MM	MN
– Opticals	MP	MR	MS
– CD ROM	MT	MV	MW
Software			
– VMS	S A	S B	S C
– UNIX	S D	S E	S F
– RSX	S G	S H	S K
– RSTS/E	S L	S M	S N
– Development Tools	S P	S R	S S
– Office Products	S T	S V	S W
– MS-DOS or OS/2	S X	S Y	S Z
– Macintosh	S 1	S 2	S 3

How to fold and despatch
Simply fold at the centre line, moisten gummed edge and seal for security.
All the information will be treated in the STRICTEST confidence and used for internal Digital purposes only.

BUSINESS REPLY SERVICE
Licence No RG510

1

DIGITAL EQUIPMENT CO. LTD.
DECdirect
P.O. Box 64
Reading
Berks
RG2 7BR

Urgent DECdirect Subscription

digital

Business Protection Services: Our commitment to protecting your total business.

Businesses today are becoming increasingly dependent upon their computing services.

Without the systems and networks to support their day-to-day activities many companies would grind to a halt or even cease trading.

We at Digital believe in a proactive approach to protect your total business.

Whereas many traditional disaster recovery offerings are limited in scope and flexibility, Digital can offer you a total business protection service

- **Contingency Planning Consultancy**
  Expert advice on contingency planning for your needs
- **Education and Training**
  Seminars and workshops focusing on disaster avoidance and recovery
- **Recover-all**
  Rapid replacement of your system guaranteed
- **RESTART**
  Alternative processing, storage and communications from either a Digital Recovery Centre or a mobile vehicle-mounted cabin.

For further information please contact your Digital representative or local Digital Customer Services office

Digital has it now

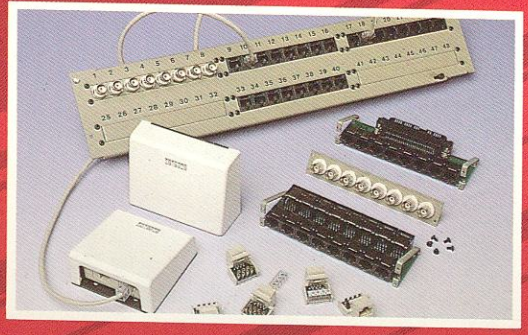
© Digital Equipment Corporation
All rights reserved. 1990
Trademarks of the Digital Corporation are:
the DIGITAL logo, RESTART, and Recover-all

digital

Digital Equipment Co Ltd
DECdirect,
PO Box 85,
Reading,
RG2 0TU

DECdirect Hardware

Telephone Orders	0734 393200
Fax Orders	0734 205442
Telex Orders	847227 DECDIRG
Post Sales Service	0734 393030
Pre Sales Technical Enquiries	0734 393200



DM-BL199-03